

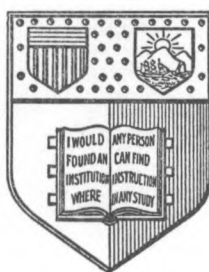
CORNELL UNIVERSITY

OFFICIAL PUBLICATION

FEBRUARY 17, 1955

Summer Session

ANNOUNCEMENT FOR SESSIONS OF
JULY 5 — AUGUST 13, 1955



SUMMER SESSION OFFICE

THE OFFICE of the Summer Session is in Room 356, Edmund Ezra Day Hall; the telephone of the office and the Director is 4-3211, Extension 2924. The office will be open from 8 a.m. to 12 noon and 1 p.m. to 4 p.m., except Saturday, during the six-week Summer Session; on Saturday the office will close at 12 noon. Miss Anita Rynone is Secretary; Mrs. Alice Abrams, Information Assistant.

ADMINISTRATIVE BOARD

Sanford S. Atwood, Ph.D., Professor of Plant Breeding and Dean of the Graduate School

Lloyd H. Elliott, Ed.D., Professor of Educational Administration and Director of the Summer Session

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CORNELL UNIVERSITY OFFICIAL PUBLICATION

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Calendar

REGULAR SIX-WEEK SESSION

- July 5, *Tuesday* Registration for the regular six-week Summer Session, 9 a.m. to 12 noon and 1:30 p.m. to 3:30 p.m. in Barton Hall. Fees are due for payment at the Treasurer's office, 260 Edmund Ezra Day Hall.
- July 6, *Wednesday* Instruction begins at the time and place announced for each course. Late registrants report to the Summer Session office to complete registration.
- July 9, *Saturday* Last day for making changes in registration, without payment of fee, at the Summer Session office, which closes at 12 noon.
- July 9, *Saturday* Classes regularly scheduled for Monday continue on this Saturday only.
- July 11, *Monday* Last day for payment of fees at the Treasurer's office, which closes at 4:30 p.m.
- August 12, *Friday* Final examinations begin; schedule on page 20.
- August 13, *Saturday* Summer Session ends, 4 p.m.

SPECIAL PROGRAMS

- June 13 to July 23 Summer Field School in Geology.
- June 27 to August 13 School of Hotel Administration Unit Courses.
- July 6 to July 9 Conference on Reading: School of Education.
- July 18 to August 5 Extension Service Summer School.
- July 31 to August 5 Administrators' Conference: School of Education.

*Be sure to bring this Announcement with you for use on
registration day and throughout the Summer Session.*

General Information

CORNELL UNIVERSITY is situated in Ithaca, in the Finger Lakes region of Upstate New York. Its Summer Session offers academic instruction for both graduates and undergraduates by members of the faculties of the Graduate School, of the Colleges of Arts and Sciences, Engineering, Agriculture, and Home Economics, and of the Schools of Education, Industrial and Labor Relations, and Hotel Administration.

This unification of the curricula and faculties of the several schools and colleges makes possible the adaptation of academic work to the special needs of summer students. Undergraduate courses are equivalent to required and elective collegiate courses leading to the baccalaureate. Advanced courses, seminars, and informal study, treating topics of concern to students with special interests, are designed with particular regard for what can satisfactorily be treated in a short term and in the summertime. The needs of teachers are met not only in the workshops, seminars, and professional courses in Education, but also in courses in a wide number of subject fields. A number of unit programs and special courses are offered for professional workers other than teachers.

All necessary facilities of the University are available to students registered in the Summer Session: libraries, classrooms, and laboratories; residence halls, dining rooms, and cafeterias; health services and medical care; counseling services; student union, chapel, playing fields, and recreational areas.

ADMISSION

The Summer Session's purpose is to place the facilities of the University at the disposal of persons who can use them to good advantage and for serious purposes during the summer period. Admission will not be granted to persons who are inadequately trained for the work they propose, or whose records in Cornell University or elsewhere are unsatisfactory. Nor will admission be granted to persons whose purposes seem inadequate or inappropriate or better served by other work at other institutions.

Admission of undergraduate or graduate students to the Summer Session establishes no priority with respect to admission to the regular terms. Students seeking admission to an undergraduate college in the fall should apply to the Director of Admissions, 233 Edmund Ezra Day Hall.

Students are eligible for admission to the Summer Session in four categories as follows:

UNDERGRADUATES . . . An undergraduate candidate for the Bachelor's degree, at Cornell University or elsewhere, is required to preregister for a program of courses totaling between four and eight credit hours, all of which are approved by the dean or other appropriate officer of his college. The maximum load of eight hours will be permitted only to those students with high academic average and with the special permission of their deans. The Director of the Summer Session is authorized to give permission to register in special cases, but of course assumes no responsibility with reference to the student's own college. Preregistration should be made by completing the undergraduate application form and can be changed only by filing a new application. The application form will be mailed on request.

June 20, 1955, is the closing date for admission of undergraduates.

GRADUATES . . . Any graduate of a recognized four-year college or normal school is eligible for admission to the Summer Session upon receipt by the Director of the Summer Session of a graduate application form. Graduate students are requested to preregister for a program of courses totaling from four to eight credit hours. This preregistration is made by completing the graduate application form and returning it to the Summer Session office by June 20, 1955. A graduate student may register as late as July 5, but is advised to select courses by June 20, in order to ensure a place in classes. A course program may be changed on registration day, July 5, in Barton Hall, if the student finds classes to which he can be admitted. The graduate application form will be mailed on request. Admission to the Summer Session in this category does not constitute admission to the Graduate School of Cornell University as a candidate for an advanced degree.

Graduate students matriculated in the Graduate School of Cornell University may, upon the recommendation of their respective committee chairmen, register for as many as eight hours of credit. Four credit hours constitutes a minimum program for graduate students. See page 10 for information regarding admission to the Graduate School.

SPECIAL STUDENTS . . . Persons who are not candidates for an academic degree will be admitted to the Summer Session for courses which will help their vocational and personal development. High school graduates who have been accepted for admission to the undergraduate colleges at Cornell may be admitted for summer study. Proof of such status should accompany applications. The Director of the Summer Session is authorized to accept in extenuating circumstances applications from students admitted to other colleges and universities. Such persons should preregister by completing the "special students" application form, which will be mailed on request. A special student may register as late as July 5, but is advised to select courses by June 20, in order to ensure a place in classes.

He is expected to register for four to eight hours of work. A course program may be changed on registration day, July 5, in Barton Hall, if the student finds classes to which he can be admitted.

PART-TIME STUDENTS . . . Mature persons may register for less than four hours of work. An application will be sent upon request. See page 8 for costs.

APPLICATION FOR ADMISSION . . . Application for admission to the Summer Session of 1955 must be made on an application form mailed by the Director of the Summer Session on request. In most cases the information called for on this form will be sufficient.

Registration coupons, necessary for registration in the Summer Session, will be mailed to the applicant after favorable action.

ACADEMIC CREDIT

All courses offered in the Summer Session are assigned appropriate hours of credit. No student may receive credit for more than eight hours of work in a single six-week Summer Session.

CREDIT . . . There is, in general, no sharp distinction between undergraduate and graduate courses. In this Announcement each course is marked immediately after the title in one of three ways:

(U) . . . These courses are intended primarily for undergraduates. Students registered in the Graduate School of Cornell University will not receive credit for these courses toward an advanced degree unless such credit is specifically recommended by the committees in charge of their work.

(U,G) . . . These courses are offered both at the graduate and the undergraduate level. Graduate students who are candidates for advanced degrees or who wish certification for work done at the graduate level must indicate at the time of registration their intention to complete the course at the graduate level and must be prepared to do any additional work that may be required. Such students registered in "U,G" courses should consult with their instructors early in the session to see that the level is properly recorded.

(G) . . . These courses are intended primarily for students who are candidates for advanced degrees, for teachers, and for others who wish certification to accrediting agencies for work done at the graduate level. Undergraduates with adequate preparation may register for these courses only after receiving permission from the instructors in charge.

CREDIT TOWARD DEGREES AT CORNELL UNIVERSITY . . . A student matriculated in an undergraduate school or college of Cornell University will be admitted to the Summer Session only after the appropriate officer from the following list has approved and signed his application for admission.

College of Agriculture: Professor J. P. Hertel.

College of Architecture: Dean T. W. Mackesey or Professor J. A. Hartell.

College of Arts and Sciences: Associate Dean M. L. Hulse.

College of Home Economics: The student's counselor.

College of Engineering: *Chemical*, Professor C. C. Winding; *Civil*, Professor N. A. Christensen; *Electrical*, Professor H. G. Smith; *Mechanical*, Professor G. R. Hanselman.

School of Hotel Administration: Professor H. B. Meek.

School of Industrial and Labor Relations: Professor C. A. Hanson.

This approval will indicate that the school or college will accept credit in the stipulated courses as credit toward a degree.

CREDIT IN INSTITUTIONS OTHER THAN CORNELL UNIVERSITY . . . An undergraduate enrolled in another institution, before admission to the Summer Session, will submit as part of his application a program of courses approved for credit by an officer of the institution in which he is a candidate for a degree. When admitted, the student will be preregistered for those approved courses. At the end of the Session an official transcript of the Summer Session record will be sent to the institution. The transcript will show what courses have been taken, the amount of credit in semester hours, and the grades received.

GRADES . . . All grades are reported in a numerical scale from 0 to 100. Courses which are audited do not appear on the official transcript. If a student *for medical or other important reasons* must be absent from the last class meeting and cannot make up the work before the last day of instruction, he may request the instructor to report his grade as *Absent*, together with a conditional numerical grade which may be used as the final recorded mark if the course work is not completed by January 1, 1956. It is the student's responsibility to make such specific arrangements with his instructors when necessary.

A student who drops a course without official change of registration will automatically receive a failing grade.

No other grades, for instance, *Incomplete*, are given in the Summer Session.

The colleges of Cornell University regard the grade of 60 as the lowest passing grade.

REGISTRATION

Registration for the six-week Summer Session will take place on Tuesday, July 5, in Barton Hall. Each student's certificate of admission, which is included with the registration coupons, will give the hour of the day at which he will be admitted. Directions for registration procedure will be

issued at the entrance. Students who for any reason have not received a certificate of admission will report to the Admissions table in Barton Hall after 9 a.m. Persons who fail to appear for registration in Barton Hall on July 5, during the scheduled registration hours, will be charged a fee of \$10 for late registration.

Graduate students who are candidates for degrees at institutions other than Cornell University, and who are planning to obtain credit toward these degrees by their Summer Session work, do *not* register in the Cornell Graduate School, but only in the six-week Summer Session. Before so registering they should arrange for the accrediting of this work by the institutions from which they plan to take their degrees. Other students who hold Bachelors' degrees but who are not candidates for advanced degrees will also register only in the six-week Summer Session.

Registration in the University is required for admission to any of the exercises of the Summer Session.

CHANGES OF REGISTRATION . . . All changes of registration after Tuesday, July 5, must be made by appearing at the Summer Session office, 356 Edmund Ezra Day Hall, before 12 noon on July 9. A fee of \$10 will be charged for all changes of registration after 12 noon on July 9. When a change of registration involves enrollment in another course, the permission of the instructor of the new course is necessary.

Changes in registration include cancellation of a course, change from one course to another, change in graduate or undergraduate level, addition of a course to a program, or change from credit to auditor's status in a course.

Changes in registration cannot be effected by notifying the instructor of a given course. Students must appear at the Summer Session office in order to make program changes.

AUDITORS . . . Permission to audit courses without additional charge is a courtesy extended to full-time students in the Summer Session. A full load is defined as four or more hours. Students enrolled for less than four hours must pay the same tuition for auditing as would otherwise be charged for courses taken for credit. Students are expected to register on July 5 for courses which they wish to audit in the same manner as for courses taken for credit. *Auditors do not take part in the work of the courses which they attend, and no grade is recorded.*

WITHDRAWALS FROM SUMMER SESSION . . . See page 8 for information concerning withdrawal.

FEES

All fees are due and payable at the Treasurer's office in Edmund Ezra Day Hall on registration day, July 5. The last day for payment of fees

without penalty is Monday, July 11. The Treasurer's office closes at 4:30 p.m.

TUITION . . . A student in the six-week Summer Session registered for four or more credit hours will pay tuition in the amount of \$125.

Students registered for three credit hours or less will pay tuition at the rate of \$30 per credit hour.

Tuition for unit courses is charged at the rate of \$25 per week, which includes a pro rata portion of the general fee. (Health and hospital services are not available to unit course registrants.)

FEES AND DEPOSITS . . . All six-week Summer Session students, regardless of the number of hours carried, will pay, in addition to tuition, a general fee of \$20, which entitles them to health and infirmary services (see page 14), administration services, and student union membership. Fees for laboratories, field trips, and incidental expenses are charged in certain courses and are indicated by asterisks in the course descriptions. A student who desires to register after the regular registration day (July 5) must pay a \$10 late registration fee. A student who wishes to make a change in program after 12 noon on July 9 must pay a \$10 fee.

REGISTRATION DEPOSIT . . . A deposit of \$28 must be made by every applicant for admission to the Graduate School after the applicant has received provisional notice of acceptance, unless the candidate has previously matriculated as a student at Cornell University. Upon the first registration the deposit is used to pay the matriculation fee, chest X-ray, and examination blank charge, and covers certain expenses incident to graduation if the student receives a degree.

WITHDRAWAL FROM THE SUMMER SESSION . . . A student may arrange for withdrawal at any time by canceling his registration *at the Summer Session office*, 356 Edmund Ezra Day Hall. In such cases, the Treasurer may refund a part of the tuition and general fee or cancel a part of the obligation that the student has incurred for tuition, provided the reason for withdrawal is stated in writing and is satisfactory to the Treasurer and the Registrar. In such cases the student is required to pay 20 per cent of the term's tuition and general fee for each week or fraction of a week between the first registration day and the date of his certificate of withdrawal, unless the withdrawal is made before Friday, July 8.

OTHER REGULATIONS CONCERNING FEES . . . Any student, graduate or undergraduate, except as hereinafter provided, who fails to pay his tuition, fees, and other indebtedness, or, if entitled to free tuition fails to claim the same at the Treasurer's office and pay his fees within the time prescribed by the University, is thereby dropped from the University. When in his judgment the circumstances in a particular case so warrant, the Treasurer may allow an extension of time to complete pay-

ments. For such an extension, the student will be assessed a fee of \$2. A reinstatement fee of \$5 will be assessed any student who is permitted to continue or return to classes after being dropped from the University for default in payments. For reasons satisfactory to the Treasurer and the Registrar, which must be presented in writing, the above assessment may be waived in any individual case.

Any tuition fee or other fee may be changed by the Trustees to take effect at any time without previous notice.

CASHING OF CHECKS . . . The Treasurer of the University accepts checks in settlement of charges payable at his office, but a rule of the Board of Trustees forbids him to cash any credit instrument, even to the extent of accepting a check or draft in amount greater than the sum due and returning the excess in cash. Students are therefore advised to open an account in an Ithaca bank as soon as they arrive in town, or else to provide themselves with travelers' checks, drafts on New York City banks, money orders, or other forms of credit instruments such as a bank will cash in the ordinary course of business.

VETERANS

Veterans who plan to study under Veterans Administration educational benefits during the Summer Session should observe the following instructions.

PUBLIC LAW 346 AND 550 VETERANS . . . Veterans enrolling for the first time under educational benefits, or veterans whose last period of training was not at Cornell, must present a Certificate of Eligibility for the course of study they plan to pursue. Application for the certificate should be made to the local Veterans Administration Regional Office, or, in the case of veterans who have had previous training, to the office where their records are located.

Veterans enrolled and using benefits at Cornell during the spring term, 1955, may use their benefits during the Summer Session, providing there is no change of course or objective, by completing enrollment forms in the Treasurer's office. Veterans making a change of course or objective must apply to the Veterans Administration for approval of the change before the close of the spring term, 1955. Application forms are available at the Treasurer's office.

Teachers who were enrolled under Public Law 346 benefits at Cornell during the Summer Session, 1954, who have not been in training since that time, must bring with them a statement in duplicate from their school authorities to the effect that they were teaching during the school year of 1954-55.

A Public Law 346 veteran who fails to present the required papers or complete the necessary forms will be expected to pay tuition and fees, subject to such reimbursement as may eventually become due. Public Law 550 veterans pay tuition and fees at the regular time.

PUBLIC LAW 16 VETERANS . . . Veterans under this law must arrange for approval by the Veterans Administration prior to registration in the Summer Session.

All questions concerning eligibility for the Veterans Administration educational benefits should be directed to the nearest Veterans Administration Office.

THE GRADUATE SCHOOL

The Graduate School is an administrative unit entirely separate from the administration of the Summer Session. Only candidates for advanced degrees at Cornell University are registered in the Graduate School in the summertime. Students who take course work at the graduate level in the Summer Session but who are not candidates for advanced degrees at Cornell University have no connection with the Graduate School.

CREDIT FOR ADVANCED DEGREES . . . Summer Session credits may be used for fulfillment of requirements for the following advanced degrees, under regulations of the Faculty of the Graduate School:

Master of Arts (M.A.)

Doctor of Education (Ed.D.)

Master of Science (M.S.)

Doctor of Philosophy (Ph.D.)

Master of Education (M.Ed.)

Master of Industrial and Labor Relations (M.I.L.R.)

A normal program in the six-week Summer Session, approved in advance and reported as satisfactory by the Special Committee, is accepted as two-fifths of a residence unit, providing the candidate has registered in both the Summer Session and the Graduate School. Requirements for Masters' degrees may be completed solely in the Summer Sessions, if instruction in the chosen major and minor subjects is offered. Only two residence units (in exceptional instances, three) for study in the Summer Session may be accepted in fulfillment of requirements for the doctorate. In order to help a student become acquainted with the School and Faculty before entering candidacy, *the Faculty allows the transfer of one Cornell Summer Session of study earned prior to admission to candidacy.*

ADMISSION . . . Students intending to become candidates for an advanced degree at Cornell should write to the Dean of the Graduate School, 125 Edmund Ezra Day Hall, for application forms and for the *Announcement of the Graduate School*. Applications received before May

1 will be acted upon in time for the accepted candidate to register in the Graduate School on registration day, July 5. The Admissions Committee cannot give assurance that an application received after May 1 will receive the same consideration that it would receive if filed before this date.

REGISTRATION DEPOSIT . . . On admission to the Graduate School, the applicant is required to pay the sum of \$28 within twenty days of notification of admission.

REGISTRATION . . . *Students matriculated in the Graduate School must register in both the Summer Session and the Graduate School.* Full information and proper forms for registering in the Graduate School are to be obtained at the Graduate School table in Barton Hall on registration day. The registration must be completed within *one week* of registration day. To register, each candidate must file a Registration of Courses blank, properly approved by his committee chairman. Each *new* candidate must file a Nomination of Committee blank.

Note: Such registration is regarded in the same fashion as registration for a regular semester and affects the deadlines for fulfillment of requirements. For instance, a new candidate must complete his first language requirement within one week of Summer Session registration day.

Candidates registered in the Summer Session who were not registered in the preceding spring term but who expect to register in a succeeding regular term for continuation of their candidacy must arrange with the Dean of the Graduate School for permission to register in the regular term.

COMPLETION OF REQUIREMENTS . . . Candidates for advanced degrees who expect to complete requirements and to take their final examinations at the end of the Summer Session should call at the office of the Graduate School not later than the third week of the Session for the necessary instructions and blanks.

CANDIDATES IN THE SCHOOL OF EDUCATION . . . Students interested in the degree of Master of Education (M.Ed.) should consult the *Announcement of the School of Education*, which will be sent upon request to Official Publication, Edmund Ezra Day Hall. The Faculty of the School of Education, functioning as a division of the Faculty of the Graduate School, has special jurisdiction over this degree.

LIVING ACCOMMODATIONS

Rooms are available to both graduate and undergraduate men and women in University-operated housing units, as well as off campus. A leaflet giving detailed information on both types of housing, *Residential*

Halls for Men and Women, may be secured by writing to the Department of Residential Halls, Edmund Ezra Day Hall.

WOMEN . . . All undergraduate women registered in the 1955 Summer Session are required to live in Residential Halls for Women and to take their meals there. *Unit V of Clara Dickson Hall* will be in use for undergraduate housing, and there will be a uniform charge of \$151.80 for board, room, and an allowance of personal laundry for the six-week period.

Graduate women under twenty-one are required to live in Residential Halls for Women. Graduate women over twenty-one may make application for rooms in Residential Halls or may live in off-campus houses.

Risley Hall will be reserved for graduate women's housing. The rates will range from \$47.40 to \$56.40 for the six-week session, depending upon the desirability and location of the room, and will include room and an allowance of personal laundry only.

Unit VI of Clara Dickson Hall will be available for graduate women who are interested in arranging for board. A uniform rate of \$142.80 for six weeks will include room, twenty-one meals a week, and an allowance of personal laundry.

There is in each unit a head resident responsible for the well being of the students. She is glad to be of help in case of illness or emergency or to supply information concerning the University and town.

Both the undergraduate and graduate dormitories open at 7 a.m. daily and close at midnight Sunday through Thursday, and at 1 a.m. Friday and Saturday.

MEN . . . Single and double rooms in the Baker group of Residential Halls will be available to both undergraduate and graduate men. Such assignments are made in order of date of application. The rates range from \$33.00 to \$45.00 for the six-week session, depending upon the desirability and location of the accommodation, and will include room only.

Insofar as practical, all men students are left to the regulation of their own affairs, subject to the University's general rules with regard to student conduct and within the jurisdiction of the Faculty Committee on Student Conduct. There are no prescribed closing hours for men's dormitories.

Student counselors are in residence in all men's housing units to advise students in cases of illness or emergency, or to give them whatever information they wish concerning the University and town.

OPENING-CLOSING DATES OF DORMITORIES . . . All Residential Halls will be open for occupancy Monday, July 4, at 8 a.m.; they will close at 2 p.m., Sunday, August 14. *Earlier or later occupancy will not be possible under any circumstances.*

APPLICATIONS FOR ROOMS . . . Applications for rooms in Residential Halls cannot be given consideration unless they are submitted on official application forms to the office of Residential Halls. Room application forms are distributed *only* by the office of the Summer Session *after* admission has been approved, and each student will automatically receive one with his certificate of admission to the Summer Session.

DEPOSITS WITH APPLICATIONS . . . A \$5 room deposit check or money order, drawn to the order of Cornell University, must accompany each application for a room in any of the Residential Halls if the application is to receive consideration. This deposit is not applied on the residence charge. If the student occupies an assigned room for even a limited amount of time, the deposit is held until after the end of the Session to cover the return of keys and any damage to building or furniture other than that occasioned by normal use, and to ensure completion of the lease.

REFUNDS OF DEPOSITS AFTER WITHDRAWAL OF ROOM APPLICATIONS . . . The \$5 room deposit will be refunded if the applicant files with the Director of Residential Halls written intention to withdraw the application for assignment by June 15, or within two weeks of applications dated June 2 or later. No \$5 room deposit will be refunded on cancellations received on or after the day of registration.

OFF-CAMPUS HOUSING . . . The Off-Campus Housing Office in Edmund Ezra Day Hall is maintained by the Department of Residential Halls. This office is a bureau of information only, maintaining files of voluntarily listed accommodations for the use of students who call at the office. Such lists cannot be mailed to prospective students.

Students wishing to sublet houses or apartments off campus are advised to arrive in Ithaca in advance of registration in order to secure such quarters. Rentals of sublet houses and apartments for the Summer Session range from \$60 to \$125 per month.

There is normally an adequate supply of rooms available in off-campus locations for the Summer Session. These rooms vary considerably in comfort, convenience, and safety. Before leasing a room, careful consideration should be given such details as distance from campus, nearness to eating places, price, ventilation, sanitation, furnishings, and fire escapes. Arrival in Ithaca a few days in advance of registration day will assure students of a better selection of off-campus rooms. It is expected that in 1955 rentals will range from \$5 to \$10 weekly.

DINING ROOMS AND CAFETERIAS . . . The dining facilities of Willard Straight Hall and the cafeteria in Martha Van Rensselaer Hall are open to both men and women students. Board may be obtained in these places, or in cafeterias, dining rooms, and restaurants near the campus, at approximately \$1.75 to \$2.25 a day.

COST OF LIVING . . . An estimate of the cost of living in Ithaca in the summer can be made by consulting the figures given in the preceding paragraphs. In private houses rentals vary according to location. Rooms are rented with the understanding that they will be occupied for the entire session unless both parties agree otherwise.

HEALTH SERVICES

The facilities of the Student Medical Clinic, 5 Central Avenue, are available to all students registered in the six-week Summer Session.

Clinic Hours

Monday through Friday	9 a.m.-4:30 p.m.
Saturday	9 a.m.-12 noon
Sunday	10-11 a.m.

(Physicians are not on duty from 12 noon until 2 p.m. A nurse will be in attendance during those hours.)

AFTER CLINIC HOURS . . . In the event of serious illness or accident when the Clinic is closed, students may go directly to the Tompkins County Memorial Hospital, Quarry Street. This service is not intended for conditions that could have been treated at the Clinic during the regular Clinic hours noted above.

EMERGENCY SERVICE . . . A doctor is always available for calls of an emergency nature when an accident has occurred or when the student is too ill to come to the Clinic or the Hospital. (In the women's dormitories these calls should be made by the Head Resident whenever possible.) Telephone calls for this service should be made through the Cornell Operator or the Medical Clinic, Ithaca 4-3211, Ext. 4518, when the Clinic is open, or Ithaca 2747 after Clinic hours. This service is not designed to care for students in their rooms. A charge of \$3 in the daytime and \$5 at night is made for these calls.

The Summer Session health fee entitles students to the following services:

- (1) Unlimited visits to the Student Medical Clinic, 5 Central Avenue;
- (2) Hospitalization with medical care for two days at the Tompkins County Memorial Hospital; a per diem charge, according to accommodations occupied, is made if hospitalization extends beyond two days;
- (3) Emergency surgical care. This is defined as initial surgical procedures which are necessary for the immediate welfare and safety of the patient.

If a student elects to consult a private physician, the cost of this service is not covered by the health fee.

COUNSELING SERVICES

The office of the Dean of Men and Dean of Women is on the first floor of Edmund Ezra Day Hall. This office maintains the following services:

INDIVIDUAL COUNSELING . . . A trained guidance and counseling staff serves students in personal, educational, vocational, and social areas.

TESTING . . . In cooperation with the University Testing Service, appropriate tests will be administered if, in the counseling process, a desire for them is expressed.

PART-TIME EMPLOYMENT OFFICE . . . This office lists part-time jobs that are available, and students interested in working should register upon arrival. Income from the type of part-time work available in the summer is nominal.

COUNSELING FOR FOREIGN STUDENTS . . . The Counselor to Foreign Students is concerned for all students from other countries. It is suggested that all foreign students write to him before coming to Ithaca and call upon him soon after arrival.

LIBRARIES

The University libraries in Ithaca comprise the general library of the University, the Mann Library of Agriculture and Home Economics, the Architecture Library, the Business and Public Administration Library, the Engineering Library, the Library of the School of Hotel Administration, the Library of the School of Industrial and Labor Relations, the Law Library, and the Veterinary Library.

In addition there are the following special department libraries: Air Science, Bailey Hortorium, Barnes, Browsing, Chemical and Metallurgical Engineering, Chemistry, Entomology, Fuertes Memorial Collection (Ornithology), Geology, Goldwin Smith, Hart Memorial, Mathematics, Military Science, Music, Naval Science, Physics, Plant Pathology, Regional History and University Archives, and Zoology. Within the College of Agriculture there are also department laboratory collections of material duplicated in the Mann Library. They are Botany, Agronomy, Animal Husbandry, Animal Nutrition, Agricultural Engineering, Dairy Industry, Nature Study, Plant Breeding, Poultry Husbandry, and Wiegand Herbarium.

The hours of opening for the University and Mann Libraries during the Summer Session are: 7:50 a.m. to 9:00 p.m. on Monday through Thursday; 7:50 a.m. to 6:00 p.m. on Friday; and Saturday morning. The schedules of other campus libraries will be found posted in each library.

The general collection of reference books and documents, the chief bibliographical publications, and the principal series of academy and learned society publications are located in the University Library. Specialized reference materials will be found in the various college and department libraries. The Reference Department of the University Library and the librarians of the college, school, and department libraries are prepared to assist students in the effective use of the libraries and in the location of research materials.

The total library resources on the Ithaca campus exceed 1,700,000 volumes. The number of periodicals, transactions, and other serials currently received is over 5,000.

In the course of their development the libraries have received and have built up special collections. Some of the most significant are in Architecture, American History, Slavery, Reformation, English and French Revolutions, American Civil War, History of Superstition, Spinoza, Dante, Pascal, Petrarch, Rhaeto-Romanic, Egyptology, China, Dramatic Literature, Freemasonry, Legal Trials, Entomology, Botany, Zoology, History of Science, Icelandic, and Regional History.

Cards of admission to the stacks and to the White Historical Library are issued to graduate students for the purpose of consultation and research. A limited number of stalls and study spaces are available to graduate students upon application. The privilege of borrowing books for home use is granted to all students who comply with the library regulations.

The *Basic Library Handbook* and the *Handbook of the Libraries for Graduate Students and Faculty* are available at the University Library.

SPECIAL REGULATIONS

CONDUCT AND SCHOLARSHIP . . . The Summer Session is administered under the general regulations governing conduct and scholarship which apply to all sessions of the University. Students are expected to familiarize themselves with dormitory and other rules and to abide by them. A statement of the University rule governing student conduct follows:

"A student is expected to show both within and without the University unflinching respect for order, morality, personal honor, and the rights of others. The authority to administer this rule and to impose penalties for its violation is vested in the University Committee on Student Conduct. The rule is construed as applicable at all times, in all places, to all students of the University."

AUTOMOBILE REGULATIONS . . . Because of local traffic and parking conditions it is necessary to require registration of both motor vehi-

cles and their drivers during the Summer Session as well as during the academic year. Each student who maintains or operates a motor-driven vehicle in or about Ithaca during the Summer Session must do the following: (1) register with the Safety Division Office, Edmund Ezra Day Hall, at the time of Summer Session registration, by paying a fee of \$1 and displaying, as directed, a registration sticker; (2) if under twenty-one years of age, have written consent of his parent or guardian; (3) produce evidence that he may drive in New York State and that the vehicle may be driven there; (4) produce evidence that the vehicle is insured at the standard minima of \$10,000-\$20,000-\$5,000. Motorcycles must be registered but may not be used on the campus during class hours. Trailers as family living units are not allowed on any University property. Campus parking during class hours is restricted to certain areas.

PROGRAM OF EXTRACURRICULAR ACTIVITIES

The Summer Session, in cooperation with departments and agencies of the University, arranges a balanced extracurricular program of public events and recreation designed to enrich the campus experience of its students, especially those who are not at the University during the winter.

THE WEEKLY CALENDAR AND ANNOUNCEMENTS . . . A weekly calendar, issued and posted on each Saturday of the Summer Session, contains not only all official notices but details of public events and also interesting news about special activities on the campus. Copies may be obtained without charge at the desk in Willard Straight Hall, at the Summer Session office, and in the Home Economics Cafeteria. Students are advised to secure copies regularly.

LECTURES . . . Public lectures, open to all Summer Session students, are given on selected Wednesday evenings of the Session. Both nonresident lecturers and members of the Faculty take part in the series, and the subjects are chosen for their general interest and timeliness. In 1954, the lecturers and their topics were:

Dr. S. S. Atwood, Dean of the Cornell Graduate School: "The Four Dimensions of Graduate Education."

Dr. Edward U. Condon, Director of Research at Corning Glass Works: "Photosensitive Glasses."

Dr. Milton R. Konvitz, Professor of Industrial and Labor Relations, Cornell University: "Are Professors Free?"

Dr. Harold H. Smith, Professor of Plant Breeding, Cornell University: "Organic Evolution and Organized Education."

Dr. Benjamin Fine, Education Editor of the *New York Times*: "Major Problems Facing American Education."

INFORMAL PROGRAMS . . . On Sunday evenings in the Browsing Library at Willard Straight Hall, members of the Faculty present informal talks on topics of current or special interest, with discussion following.

SAGE CHAPEL . . . Religious services are conducted in Sage Chapel throughout the academic year by clergymen of various religious denominations. There will be services in the Chapel on five Sundays during the Summer Session, July 10 to August 7, inclusive.

CONCERTS . . . A series of Thursday evening concerts is given, open without charge to students in the Summer Session.

RECORDED MUSIC . . . One evening each week a concert of recorded music is broadcast on the Library Slope. In inclement weather, the concert is presented in the Music Room of Willard Straight Hall. Each Saturday evening a program of recorded music is broadcast in the Music Room.

RECREATIONAL FOLK AND SQUARE DANCING . . . For students and Faculty members on Monday evenings. An instructor is present.

SUMMER THEATRE . . . Laboratory and studio performances, open to the public without charge, will be given by the Summer Theatre from time to time during the session, as announced in the weekly calendar. Regularly enrolled members of the classes in Speech and Drama may compete for places in the casts and production staffs; detailed announcements will be made in the various classes.

FILMS . . . Noteworthy European and American films are presented by the University Theatre during the Summer Session; admission is charged. In 1954, the following films were shown: "The Importance of Being Earnest," "The Mikado," "Mr. Deeds Goes to Town," "Drums Along the Mohawk," "Diary of a Country Priest," "Jane Eyre," "Island Rescue," "Miss Julie," and "Little Fugitive."

WILLARD STRAIGHT HALL . . . The student union of Cornell University provides meal service, snacks for late afternoon and evening service, lounges for men and women, rooms for student meetings and games, dancing, the University Theatre, a billiards and games room, a barber shop for men, a browsing library well stocked with books of general interest, a music room, and an art room. On the upper floors of the Hall are sleeping rooms used principally by parents and guests of students, by alumni, and by guests of the University.

The Board of Managers of Willard Straight Hall arranges for dances, open houses, games, art exhibits, and other recreation and entertainment.

SPORTS . . . Softball diamonds, located on Upper Alumni Field, tennis courts, conveniently located around the campus, and an 18-hole golf

course on Warren Road are available for the use of Summer Session students. A gorge at one end of Beebe Lake on the campus forms a natural swimming pool, where two guards are on duty every day of the Session from 1 to 6 p.m.

Private lessons in golf, tennis, and swimming, and an intramural softball league are offered by the Department of Physical Education and Athletics.

Tennis. Hours to be arranged.

Golf. Hours to be arranged. Call Mr. George Hall at the University Golf Course, Ext. 4411.

Swimming. Hours to be arranged. See Mr. Hanley W. Staley at Beebe Lake, or call Ext. 3706 or Ithaca 4-1526.

Intramural Softball League. Groups or individuals who wish to participate in softball competition should see Mr. Hanley W. Staley, Teagle Hall, Ext. 3706 or Ithaca 4-1526.

For more detailed information, address Mr. R. J. Kane, Director of Athletics, Schoellkopf Hall.

Curriculum

COURSES OF INSTRUCTION . . . The listing is alphabetically by departmental subheadings under general fields of instruction. For offerings in particular subjects, consult the Index. Because of demands that may be placed upon the instructing staff, it may be necessary to substitute instructors for the ones named in the course descriptions. *The Director reserves the right to cancel any course for which, through unforeseen circumstances, satisfactory instruction cannot be provided.*

UNIT COURSES . . . Unit courses, less than six weeks in length, are indicated by a *u* following the course number, and their dates are given in the descriptions. (See page 8 for tuition charges.)

COURSES WITH FEES ATTACHED . . . Courses requiring laboratory or other fees are marked by asterisks.

CLASS SCHEDULES . . . In most courses of instruction, classes will meet five times a week, on each weekday except Saturday. Unless otherwise specified, all courses extend through the regular six-week session, July 5-August 13. Class periods begin on the hour, unless otherwise indicated, and are fifty minutes in length. Laboratory periods are of various lengths, as indicated in the descriptions of courses which include laboratory work.

ROOM SCHEDULES . . . The meeting places of courses are given in the course descriptions. Any changes in room assignments will be found in a supplementary announcement which will be distributed to students on registration day.

SCHEDULE OF EXAMINATIONS . . . With a few exceptions, examinations will be held on Friday, August 12, and Saturday, August 13, at the hours indicated by the schedule below; in the exceptional cases, the examination will be held on Thursday, August 11, at 2. The usual classrooms will be used unless a change is announced by the instructor.

In courses which meet for more than one hour daily, the examination period is determined by the first hour at which they meet. For example, Economics 101 meets daily at 10 and at 11; the examination will be held on Friday at 10:30. In courses which include both lecture and laboratory periods, the examination period is determined by the lecture hour. In courses in which no examination is to be given, an announcement to that effect will be made by the instructor; in such cases the last meeting of each course will be held in the examination period for that course.

Examinations will be held as follows:

- 8 o'clock classes, Friday at 8.
- 9 o'clock classes, Saturday at 8.
- 10 o'clock classes, Friday at 10:30.
- 11 o'clock classes, Saturday at 10:30.
- 12 o'clock classes, Friday at 2.
- Afternoon classes, Saturday at 2.

AGRICULTURE

AGRICULTURAL EDUCATION

(See *Education*, p. 24)

AGRICULTURAL ENGINEERING

*Ag.En. 163u. *TEACHING FARM STRUCTURES*. (U,G) 2 hours credit. July 5—July 22; July 25—August 13. Lectures, M T W Th F 10; laboratory, T Th 1-4:30. Ag. En. Lab. Mr. Foss.

Designed to help teachers of vocational agriculture in presenting the subject of farm structures to their pupils. Field trips will be taken to show types of structures and construction. Opportunity will be given for some practical experience in carpentry and concrete construction. Laboratory fee, \$3.

*Ag.En. 170. *HANDICRAFT FOR TEACHERS*. (U,G) 2 hours credit. M W F 1:00-4:30. Ag. En. Teaching Lab. Mr. Foss.

Designed to acquaint the teacher with handicraft work suitable for both classroom and extracurricular activities. Opportunity is given in the laboratory to work with wood, art metal, ornamental iron, metal casting, plastics, raffia, and cane with and without special tools. Developing skills is a primary object. Special effort is made to show how handicraft can be started on a limited budget and expanded as the need arises. Laboratory fee, \$5.

*Ag.En. 206. *FIELD PROBLEMS IN AGRICULTURAL ENGINEERING*. (U) 6 hours credit. Limited to students in five-year agricultural engineering curriculum. M T W Th F 8-5. Messrs. GRAY, LEVINE, MILLIER, SHEPARDSON, and TERRY.

A course designed to apply basic engineering design and analytical principles to typical field problems encountered in professional agricultural engineering practice. The work will be distributed in the fields of power and machinery, structures, soil and water, and electrification. Laboratory fee, \$5.

Ag.En. 251u. *SPECIAL PROBLEMS IN AGRICULTURAL ENGINEERING*. (U,G) 1 or more hours credit. July 5—July 22; July 25—August 13. Prerequisite, adequate ability and training for the work proposed, and permission to register. Department staff.

Special work in any branch of agricultural engineering on problems under investigation by the department or of special interest to the student, provided, in the latter case, that adequate facilities can be obtained.

ANIMAL HUSBANDRY

An.Hus. 117u. *RECENT ADVANCES IN DAIRY SCIENCES*. (U,G) 2 hours credit. July 5—July 23; July 25—August 13. M T W Th F 8–10. Wing, Room C. Mr. S. E. SMITH and invited lecturers.

Designed to bring the student up-to-date in all important phases of dairy production; feeding, breeding, milk processing, farm management, milk marketing, and forage crops.

BIOLOGICAL SCIENCES

BACTERIOLOGY

*Bact. 1. *GENERAL BACTERIOLOGY*. (U,G) 2 or 4 hours credit. Lectures, M T W Th F 1:40, Stocking 119. Laboratory, M T W Th F 2:30–4:30, Stocking 301. Mr. VANDEMARK.

An introductory course giving a general survey of the field of bacteriology, together with the fundamentals essential to further work in the subject. Laboratory fee, \$10, for those seeking four credit hours.

BIOCHEMISTRY

Bioch. 101. *GENERAL BIOCHEMISTRY*. (U,G) 4 hours credit. Prerequisite, organic chemistry. Lectures, M T W Th F 8–10. Savage 145. Mr. WILLIAMS.

Discussion of the chemistry of plant and animal substances and the reactions occurring in biological systems.

*Bioch. 102. *GENERAL BIOCHEMISTRY*. (U,G) 2 hours credit. Prerequisite, quantitative analysis, and parallel, Course 101. Laboratory, M T W Th F 10–12:30. Savage 230. Mr. WILLIAMS.

Laboratory practice with plant and animal materials and the experimental study of their properties. Laboratory fee, \$15.

BIOLOGY

*Biol. 105. *LABORATORY METHODS IN BIOLOGY*. (U,G) 3 hours credit. Prerequisite, an introductory course in biology, botany, or zoology. Lecture and laboratory, M T W Th F 8–11. Roberts 306. Mr. UHLER.

For students who intend to teach or follow some phase of biology as a profession. Subjects covered: collection, preservation, and storage of materials; the preparation of bird and mammal study skins; injection of blood vessels; clearing and staining small vertebrates; protozoological methods, and the preparation and staining of smears, whole mounts, and sectioned materials. Laboratory fee, \$7.50.

*Biol. 307. *SPECIAL PROBLEMS IN BIOLOGY*. (U,G) Credit and hours to be arranged. Mr. UHLER.

May be elected by qualified persons with the permission of the instructor under whom the work is done. Laboratory fee, variable, according to the nature of the problem.

BOTANY

*Bot. 31. *PLANT PHYSIOLOGY*. (U,G) 4 hours credit. Prerequisite, general botany or biology, and elementary chemistry. Lectures, M T W Th F 9, Plant Science 141. Laboratory, M T W Th F 10-12, Plant Science 227. Mr. CLARK.

Designed to acquaint students with the important life processes of plants. Topics such as water-relations, photosynthesis, translocation, digestion, respiration, mineral nutrition, and growth relations are studied in some detail, and particular emphasis is placed, both in laboratory and in classrooms, on discussion of the principles and their applications to living plants. Laboratory fee, \$5.

CONSERVATION

*Cons. 9. *GENERAL ORNITHOLOGY*. (U,G) 3 hours credit. Lectures, M W F 8; laboratory and field trips, M W F 9-12. Fernow 210. Mr. SIBLEY.

An introduction to the study of birds; their structure, classification, adaptations for flight, migration, distribution, behavior, ecology and evolution. Field and laboratory work on identification of local species. Fee, \$3.

*Cons. 126. *ADVANCED ORNITHOLOGY*. (U,G) 2 hours credit. Prerequisite, Course 9 or its equivalent. With special permission may be taken concurrently with Course 9. Lectures, T Th 1:40. Laboratory, T Th 2:30-5:30. Fernow 210. Mr. SIBLEY.

The structure and classification of the birds of the world; geographical distribution and characteristics of orders and families. Advanced study of avian biology, systematics, and the literature. Fee, \$3.

FLORICULTURE

*Flor. 12. *HERBACEOUS PLANT MATERIALS*. (U,G) 3 hours credit. Lectures, M T W Th 8, Plant Science 37. Laboratory, M W 2-5, Plant Science 15. Mr. LEE.

A study of the ornamental herbaceous plants used in landscape and garden plantings. Emphasis is placed on the identification, uses, and culture of annuals and summer flowering perennials. Laboratory fee, \$2.

ZOOLOGY

*Zool. 211-212. *COMPARATIVE ANATOMY OF THE VERTEBRATES*. (U,G) 6 hours credit. Prerequisite, introductory zoology or biology. M T W Th F 8-1. Stimson G-25 and 310. This course is the equivalent of Zoology 211-212. Mr. GILBERT.

A thorough study and dissection of representative vertebrate types, including a fish, amphibian, reptile, bird, and mammal, together with demonstrations on species other than the types dissected. Intended to give students an evolutionary background for the study and appreciation of the structure of higher vertebrates, including man. Laboratory fee, \$25.

EDUCATION

ADMINISTRATION AND SUPERVISION

Educ. 219. *SEMINAR IN PERSONNEL ADMINISTRATION IN EDUCATIONAL INSTITUTIONS*. (G) 2 hours credit. M T W Th F 9. Stone 201. Mr. WINSOR.

A study of the problems of human relations in educational institutions. The methods and principles of recruitment, selection, placement, maintenance, organization, and government of staff and employees are analyzed.

Educ. 243. *PROCEDURES AND TECHNIQUES IN SUPERVISION*. (G) 2 hours credit. M T W Th F 9. Warren 201. Miss STOUTENBURG.

Designed for superintendents, supervisors, and principals; inexperienced students admitted only by permission. A consideration of the nature and purpose of supervision; the improvement of the learning-teaching process; skill in observations; analysis of methods; relationships between general and specific objectives; selection, analysis, and organization of subject matter; measuring and testing results; assisting teachers in professional growth.

Educ. 261. *FUNDAMENTALS OF EDUCATIONAL ADMINISTRATION*. (G) 2 hours credit. M T W Th F 8. Warren 201. Mr. ELLIOTT.

An introduction to the study of administration with special application to the educational program. Both the science and the art of administration are examined.

Educ. 263. *THE PRINCIPALSHIP OF THE ELEMENTARY SCHOOL*. (G) 2 hours credit. M T W Th F 8. Warren 101. Miss SMITH.

Role of the principal in improving instructional procedures in the elementary school. Study of current research and writings in the areas of child development, learning theory, and curriculum construction. Methods and materials for instruction and evaluation in the skills and content areas of the elementary curriculum will be considered.

Educ. 265. *SCHOOL PLANT*. (G) 2 hours credit. M T W Th F 11. Warren 31. Mr. GRAGG.

A course for administrators and prospective administrators, dealing with building utilization, operation, maintenance, and construction. Consultants will be available in architecture, insurance, finance, and other subjects relating to school building planning. Field trips will be arranged to visit construction projects.

FOURTH ANNUAL ADMINISTRATORS' CONFERENCE

The School of Education will conduct the fourth annual work conference for administrators during the fifth week of the Summer Session, July 31–August 5. This year's conference will deal with problems in instruction, finance, law, and special services. Professor Claude Kulp will serve as director. Since preregistration is required, interested persons should address inquiries to his office, 205 Barnes Hall, Cornell University.

ADULT EDUCATION

Educ. 293. *ADMINISTRATION AND SUPERVISION OF ADULT EDUCATION*. (G; U by permission.) 2 hours credit. For administrators, supervisors, social workers, teachers, and others interested in adult leadership. M T W Th F 9 and laboratory section to be arranged. Warren 101. Mr. MACK.

Educ. 636. *METHODS AND MATERIALS IN ADULT EDUCATION*. (See *Industrial Education*, p. 30.)

AGRICULTURAL EDUCATION

To provide teachers of vocational agriculture with an opportunity to obtain graduate work without taking extended leaves of absence from their positions,

three-week unit courses are being made available in technical, general education, and special methods areas. Two three-week sessions will run concurrently with the regular six-week Summer Session.

Residence credit earned in three-week unit courses may be applied toward the requirement for the Master of Education degree only. Registration for three credit hours is considered a normal load. Permission to earn more than three credit hours may be obtained by special petition to the Director of the School of Education. Registration for the first three-week session will be July 5, and for the second three-week session, July 25.

The following courses, in addition to those in agricultural education, are being made available on a three-week unit basis: An.Hus. 117u. *RECENT ADVANCES IN DAIRY SCIENCES* (see *Animal Husbandry*); Ag.Eng. 163u. *FARM STRUCTURES* (see *Agricultural Engineering*); R.Soc. 134u. *PUBLIC PROBLEMS OF AGRICULTURE AND FARM PEOPLE* (see *Rural Sociology*); and Educ. 111u. *EDUCATIONAL PSYCHOLOGY* (see *Educational Psychology*).

Educ. 232u. *PLANNING UNITS OF INSTRUCTION IN VOCATIONAL AGRICULTURE*. (G) 2 hours credit. July 5–July 23; July 25–August 13. M T W Th F 10–12. Laboratory to be arranged. Warren 14. Mr. KUNSELA.

Consideration will be given to identifying and justifying units, developing teaching objectives, analyzing farm problems, selection of teacher-pupil activities, and the evaluation of pupil progress and achievement as applied to individual and group instruction.

Educ. 233u. *PLANNING INDIVIDUAL FARMING PROGRAMS IN VOCATIONAL AGRICULTURE*. (U,G) 2 hours credit. July 5–July 23; July 25–August 13. M T W Th F 8–10 and field work to be arranged. Warren 14. Mr. SMITH.

The function of individual farming programs in teaching; how they are initiated, developed, and directed in vocational agriculture.

EDUCATIONAL PSYCHOLOGY AND MEASUREMENT

Educ. 111u. *EDUCATIONAL PSYCHOLOGY*. (U,G) 2 hours credit. July 5–July 23; July 25–August 13. M T W Th F 8–10. Laboratories as arranged. Comstock 145. Mr. COFFIN.

Designed to meet the needs of teachers of vocational agriculture. The application of psychological principles and the results of experiments and investigations to the instructional process in vocational education in agriculture.

Educ. 211. *EDUCATIONAL PSYCHOLOGY*. (U,G) 2 hours credit. M T W Th F 11. Stone 105. Mr. GLOCK.

For teachers, supervisors, guidance workers, and administrators. Designed to help students with problems in learning.

Educ. 215. *PSYCHOLOGY OF ADOLESCENCE*. (U,G) 2 hours credit. M T W Th F 10. Warren 31. Mr. ANDRUS.

A study of the interrelationships of organic and cultural heritage and physical and social environment in respect to the physical, intellectual, moral, social, and emotional development of the adolescent; the effect of preceding stages of development on maturity.

Educ. 253. *INTRODUCTION TO EDUCATIONAL STATISTICS*. (G) 2 hours credit. M T W Th F 8. Warren 31. Mr. AHMANN.

A study of common statistical procedures encountered in educational literature and research. Includes the computation and interpretation of descriptive measures and tests of significance.

Educ. 255. *USE AND INTERPRETATION OF TESTS IN GUIDANCE AND PERSONNEL ADMINISTRATION*. (G) 2 hours credit. M T W Th F 9. Stone 212. Open to students in guidance or personnel administration and to classroom teachers who expect to work with standardized group tests. Mr. ANDRUS.

Deals with the development, use, and interpretation of aptitude tests as a basis for guidance and selection in public schools, colleges, and/or industry.

Educ. 315. *READING IN THE SECONDARY SCHOOL AND COLLEGE*. (G) 2 hours credit. M T W Th F 12. Stone 105. Mr. MERSAND.

Designed for all teachers of the content subjects as well as for administrators and supervisors. Directors of college reading improvement programs will find that the course offers helpful suggestions for their courses as well as an opportunity to observe the teaching of reading to college students.

Educ. 317. *EDUCATIONAL DIAGNOSIS AND REMEDIATION*. (G) 2 hours credit. M T W Th F 8. Warren 232. Mr. HARRIS.

Designed to explore fully the general techniques of diagnostic and remedial procedures and to develop their implications for the basic skills.

Educ. 316. *REMEDIAL READING*. (See *Elementary Education*, p. 26.)

See also course offerings in *Psychology* (p. 54) and *Child Development and Family Relationships* (p. 40).

ELEMENTARY EDUCATION

[Educ. 24. *SOCIAL STUDIES IN THE ELEMENTARY SCHOOL*. Not given in the 1955 Summer Session.]

Educ. 316. *REMEDIAL READING*. (G) 2 hours credit. Consent of instructor. 3 p.m., July 6 only; later meeting hours to be arranged. Stone 201. Miss MASTROTTO.

Diagnosis and remediation of reading difficulties. Opportunity to work with pupils enrolled in the Reading Clinic during the Summer Session will be provided. Open to both elementary and secondary school teachers.

Educ. 318u. *WORKSHOP IN READING*. (U,G) 3 hours credit. July 5–July 22. M T W Th F 9–11, and conferences to be arranged. Miss COOKE, Mr. GLOCK, Mr. HARRIS, Mr. MACDONALD, Miss MASTROTTO, Mr. PAUK, Miss WARDEBERG, Miss YOUNG.

Organization of the workshop will be based on identification, solution, and interpretation of classroom problems. Interest groups will include primary, intermediate, junior high, senior high, college, and remedial. It is scheduled so that participants may enroll for other courses which extend through the six-week session, should they so desire. Write the Director of the Summer Session, 356 Day Hall, for special announcement which includes further information on the workshop.

CONFERENCE ON READING

A three-day conference on reading will be conducted July 6–9, as a part of the Summer Session's expanded offerings in 1955.

Emphasis will center on the theme "Meeting the Needs in Today's Classrooms." It will be of interest to elementary, secondary, and college teachers and will also include a special section on remedial reading. Students enrolled in the *Workshop*, Educ. 318u, will also participate in this conference. The staff will include Dorothy Cooke, Donald Durrell, Marvin D. Glock, William S. Gray, Albert Harris, Lillian Mastrotto, Joseph Mersand, Linda Smith, Helen Wardeberg, and Nancy Young.

Write the Director of the Summer Session, 356 Day Hall, for special announcement which includes further information on the conference.

Educ. 413. *PROBLEMS IN THE IMPROVEMENT OF READING INSTRUCTION*. (G) 2 hours credit. Prerequisite, Educ. 313 or equivalent. M T W Th F 12. Warren 232. Miss WARDEBERG.

Designed for teachers, supervisors, and administrators in the elementary school interested in the improvement of reading instruction. Concerned with recent developments in the field of reading, appraisal, and improvement of teaching practices. Instructional materials and evaluation of pupil achievement will be considered. Each student may concentrate on problems in the area in which he is most interested.

Educ. 107. *THE TEACHING OF NATURE STUDY AND ELEMENTARY SCHOOL SCIENCE*. (See *Nature Study*, p. 30.)

Music 109. *MUSIC IN THE ELEMENTARY SCHOOL*. (See *Music*, p. 39.)

Educ. 215. *PSYCHOLOGY OF ADOLESCENCE*. (See *Educational Psychology*, p. 25.)

Sp.&Dr. 231. *SPEECH FOR THE CLASSROOM TEACHER*. (See *Speech and Drama*, p. 37.)

Educ. 263. *THE PRINCIPALSHIP OF THE ELEMENTARY SCHOOL*. (See *Administration and Supervision*, p. 24.)

Arch. 324. *WORKSHOP FOR THE ART TEACHER*. (See *Painting*, p. 39.)

Sp.&Dr. 351. *TEACHERS' COURSE IN SPEECH CORRECTION*. (See *Speech and Drama*, p. 38.)

Psych. 412. *THE PSYCHOLOGY AND CLINICAL STUDY OF EXCEPTIONAL CHILDREN*. (See *Psychology*, p. 54.)

See also *Intensive Teacher Training Program* (p. 27), and *Child Development and Family Relationships* p. 40.)

INTENSIVE TEACHER TRAINING PROGRAM

For students in their first summer's work, the following program is offered, carrying 7 credit hours.

Educ. 147. *SEMINAR IN ELEMENTARY EDUCATION*. (G) 2 hours credit. M W F 1:30-3:00. Warren 101. Mrs. SMITH.

Designed for inexperienced teachers in the elementary school. A consideration of the use of libraries, audio-visual aids, and other teaching materials; the keeping of records and preparing of reports; relationships with principals and supervisors; and pupil personnel problems of the elementary school.

Educ. 225. *DEMONSTRATION SCHOOL*. (G) 1 hour credit. M T W Th F 9-11:30. Conferences for observers, T Th 2-2:30. Warren 37. Miss KNAPP and others.

A demonstration school exemplifying modern informal methods in elementary schools will be maintained on the campus for observational purposes. Special opportunities for observation will be scheduled for classes in supervision and methods.

Educ. 313. *READING IN THE ELEMENTARY SCHOOL*. (G) 2 hours credit. M T W Th F 12. Warren 201. Miss SMITH.

Introductory course in the teaching of reading. Special emphasis on reading readiness, initial instruction, word recognition techniques and comprehension skills, methods and materials.

Educ. 314. *ARITHMETIC IN THE ELEMENTARY SCHOOL*. (G) 2 hours credit. M T W Th F 8. Warren 101. Mrs. GELDER.

Introductory course in the teaching of arithmetic. Development of number concepts and understanding of number system, instruction in fundamental operations, use of materials and evaluation techniques.

Students beyond the first summer's work should consult their advisers when planning their programs.

EXTENSION EDUCATION

(See p. 55)

GUIDANCE AND PERSONNEL ADMINISTRATION

Educ. 282. *EDUCATIONAL AND VOCATIONAL GUIDANCE*. (G) 2 hours credit. M T W Th F 11. East Roberts 222. Mr. NELSON.

Guidance principles and practices. Historical and theoretical background of the guidance movement; educational, vocational, and other information needed; the study of the individual; group methods; counseling; placement and follow-up; the organization, administration, and appraisal of guidance programs.

Educ. 284. *GROUP TECHNIQUES IN GUIDANCE*. (G) 2 hours credit. M T W Th F 10. Stone 201. Mr. SHEAR.

Methods and materials for presenting occupational and orientation information to students. Classes in occupations, orientation groups, field trips, clubs, work-experience programs, and other media.

Educ. 286. *ORGANIZATION AND ADMINISTRATION OF GUIDANCE PROGRAMS*. (G) 2 hours credit. M T W Th F 12. East Roberts 223. Mr. SHEAR.

Principles and practices in planning and conducting a guidance program and other pupil personnel services. This is one of the courses required for permanent certification in guidance in New York State.

Educ. 288. *CASE STUDIES IN COUNSELING*. (G) 2 hours credit. M T W Th F 9. Prerequisites, 255, 282, and 283, or their equivalents. Warren 101. Mr. NELSON.

An advanced course in the principles and techniques of counseling in which actual cases are used for demonstration purposes. Preparation for and conduct of counseling interviews; the making of case studies; referral and other procedures.

Educ. 255. *USE AND INTERPRETATION OF TESTS IN GUIDANCE AND PERSONNEL ADMINISTRATION*. (See *Educational Psychology*, p. 26.)

Courses tentatively scheduled for the Summer Session of 1956:

Educ. 283. *Counseling*; Educ. 285. *Occupational and Educational Information*; Educ. 287. *Practicum in Measurement and Appraisal for Counselors*.

HISTORY AND PHILOSOPHY OF EDUCATION

Educ. 244. *PHILOSOPHY OF EDUCATION*. (G; U by permission) 2 hours credit. M T W Th F 10. Boardman 121. Mr. HIXON.

A critical consideration of educational philosophies which are generally recognized as significant influences upon education in the United States.

Educ. 296. *HISTORY OF AMERICAN EDUCATION*. (G; U by permission) 2 hours credit. M T W Th F 11. Warren 232. Mr. STUTZ.

A consideration of developments in American education from the seventeenth

century to the present. Special attention will be given to social and economic trends influencing the progress of public education and to contemporary educational problems.

HOME ECONOMICS EDUCATION

Educ. 403. *SPECIAL PROBLEMS FOR GRADUATE STUDENTS*. (G) Credit and hours to be arranged. Department staff.

For graduate students recommended by their chairmen and approved by the instructor in charge for independent, advanced work.

Educ. 407. *THESIS AND RESEARCH*. (G) Credit and hours to be arranged. Registration with permission of the instructor. Department staff.

*Educ. 433. *TEACHING HOMEMAKING AT THE SECONDARY SCHOOL LEVEL*. (G) 2 hours credit. M T W Th F 10. Van Rensselaer 124. Miss MOSER.

Designed for students who have had experience in teaching homemaking in secondary schools. Program planning, teaching procedures, materials, and other pertinent problems related to the teaching of homemaking at the secondary school level. Opportunity will be provided for work on individual problems. Fee, \$2.

Educ. 456. *CURRENT DEVELOPMENTS AND HOME ECONOMICS EDUCATION*. (G) 2 hours credit. M T W Th F 11. Van Rensselaer 124. Mrs. HOEFER.

Some of the social, economic, and technological developments that affect families today, and the implications of these developments for teaching home economics. Current developments as they apply to teaching family relations, managing the home, rearing children, housing, feeding, and clothing the family. Consultants will meet with the students at appropriate periods to help clarify developments being considered. Fee, \$2.

*Educ. 469. *SUPERVISION OF HOME ECONOMICS*. (G) 2 hours credit. M T W Th F 10. Van Rensselaer 301. Miss HUTCHINS.

For supervisors and supervising teachers who are already carrying supervisory responsibilities and for experienced teachers, extension workers, and others who are interested in qualifying for such responsibilities. Fee, \$2.

*Educ. 490. *TEACHING HOME ECONOMICS IN HIGHER EDUCATION*. (G) 2 hours credit. M T W Th F 9. Van Rensselaer 117. Miss HUTCHINS.

For students who are interested in preparing to teach one or more phases of home economics in colleges, junior colleges, and institutes. Contributions of Home Economics at the college level; the philosophy involved in cooperatively planned programs; the characteristics of college-age youth; factors affecting student learning; principles influencing the choice of teaching procedures and materials for college teaching; the educative values of group teaching. Fee, \$3.

Educ. 510. *WORKSHOP IN CURRICULUM PLANNING FOR EARLY SECONDARY EDUCATION IN HOMEMAKING*. (G) Full-time July 5-July 15. 2 hours credit. For New York State Home Economics teachers only. Limited enrollment. Preregistration before June 15 required. Van Rensselaer. Miss MARKS and Miss LAPIDUS.

This workshop is planned for New York State teachers who are concerned with the homemaking program at the early secondary school level. It will provide opportunity for a study of the elements of curriculum planning: developmental tasks of early adolescents, desirable methods and activities, appropriate teaching materials and evaluation techniques, and effective use of facilities. Students will develop courses for grades 7, 8, and 9. (See p. 8 regarding tuition for unit courses.)

*T.&Clo. 500u. *TEXTILES AND CLOTHING IN THE HOMEMAKING PROGRAM*. A 3-week unit course given jointly by the Department of Textiles and Clothing and the Department of Home Economics Education. (See page 46.)

INDUSTRIAL EDUCATION

Educ. 364. *TRAINING IN INDUSTRY*. (U,G) 2 hours credit. M T W Th F 10. I.&L.R. Bldg. 14. Mr. BROPHY.

A study of the concepts and means used by management to assist employees to develop their skills, understandings, attitudes, and ideals. Consideration is given to planning, organizing, and administering training programs and to policies, staffing, coordination, publicity, facilities, budget, records and reports, and evaluation. Types of programs include apprenticeship, job instruction, orientation and induction, pre-supervisory and supervisory training, executive development programs, and general education in industry. Discussions emphasize analysis of training needs, objectives, schedules, innovations in method, and incentives to encourage participation.

Educ. 631. *SEMINAR IN INDUSTRIAL EDUCATION*. (U,G) 2 hours credit. M T W Th F 9. I.&L.R. Bldg. 14. Mr. EMERSON.

A graduate seminar dealing with current problems of special importance in the field of industrial education within industry and in public industrial and technical institutions.

Educ. 632. *ADMINISTRATION OF INDUSTRIAL EDUCATION*. (U,G) 2 hours credit. M T W Th F 12. I.&L.R. Bldg. 14. Mr. BROPHY.

Study of administrative practices in industrial and technical schools; relationships of the administrator with other school officers, advisory committees and their functioning; public relations; problems of plant equipment; budgetary procedures; staff personnel relations; teacher selection and induction; student personnel procedures; evening school organization and administration.

Educ. 636. *METHODS AND MATERIALS IN ADULT EDUCATION*. (U,G) 2 hours credit. M T W Th F 11. I.&L.R. Bldg. 14. Mr. EMERSON.

Adult education from the standpoint of the teacher or group leader in adult evening classes, extension programs, educational programs in industrial plants, and workers' education. Types of adult education service; course and program development; methods of instruction, including conference leadership and role playing; audio-visual and other instructional aids and their uses with adult groups; techniques in dealing with large groups.

Educ. 699. *SPECIAL STUDIES*. (G) Credit and hours to be arranged.

Directed research in special problems.

NATURE STUDY AND SCIENCE EDUCATION

Educ. 107. *THE TEACHING OF NATURE STUDY AND ELEMENTARY SCHOOL SCIENCE*. (U,G) 2 hours credit. Lectures, M W F 10; laboratory or field work, M W 2-4:30. Stone 7. Miss GORDON.

The content and method of nature study and elementary school science with emphasis on the biological science aspects. (Given in a three-year cycle, emphasizing the biological, the physical, and the earth science aspects of the subject.)

Educ. 108. *FIELD NATURAL HISTORY*. (U,G) 2 hours credit. Lectures, M W 2-2:50. Weekly field trips, M W 2:50-5:20, begin with first meeting and continue regardless of weather. One additional period a week arranged. Stone 7. Mr. FISCHER.

Studies of local plants and animals, their ecology, and their relations to humans. Applications to teaching science and conservation are emphasized.

Educ. 201. *PHOTOGRAPHY FOR TEACHERS*. (U,G) 2 hours credit. Lectures, T Th 2-2:50; laboratory, T Th 2:50-5:30. One additional period a week arranged. Stone 7. Mr. FISCHER.

For those who wish to vitalize their teaching, writing, or lecturing through the medium of photography. Some basic photographic skills based on previous experiences will be assumed. Lectures and laboratory work will include demonstrations as well as individual experimentation and processing. Open to seniors and graduate students with interests in nature, science, and conservation education. Others by permission.

Educ. 202. *NATURE LITERATURE*. (U,G) 2 hours credit. Given in alternate years. Open to seniors and graduate students interested in nature, science, and conservation education. M T W Th F 12. Stone 7. Miss GORDON.

A survey of nature and science prose and poetry, with attention to their significance at elementary and secondary school levels and for leisure reading.

Educ. 204. *AUDIO-VISUAL METHODS IN TEACHING*. (U,G) 2 hours credit. M T W Th F 8. Stone 7. Mr. JOHNSON.

A study of pictures, posters, graphs, models, slides, films, and other audio-visual devices in their relation to instruction. While emphasis will be on effective methods and techniques concerned with the use of audio-visual materials and devices, there will also be opportunities to prepare materials for classroom use and for mass communication.

Educ. 206. *SCIENCE FOR SECONDARY SCHOOL TEACHERS*. (U,G) 4 hours credit. Lectures, demonstrations, discussions, M T W Th F 10-12. Trips will be scheduled several afternoons each week. Mr. JOHNSON and staff.

For junior and senior high school science teachers who (1) wish to broaden their knowledge of the sciences, (2) desire to learn about recent developments in science, (3) want to clarify their understanding of applied science. Selected topics in the various sciences; visits to research laboratories and industrial production units; material and methods for teaching.

Several scholarships covering full tuition plus an allowance for other expenses will be available. Selection for scholarship grants will be based on (a) what the applicant regularly teaches, (b) the geographical location of applicant, (c) the applicant's undergraduate record, and (d) the special problems that the applicant desires to study. Secondary school science teachers interested in a scholarship should request the *Science Teachers Scholarship Application* form from the Summer Session office, 356 Edmund Ezra Day Hall. They should also complete the application form for the Graduate School which will be sent to each applicant. Early applications will make possible early decisions and notification.

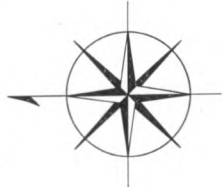
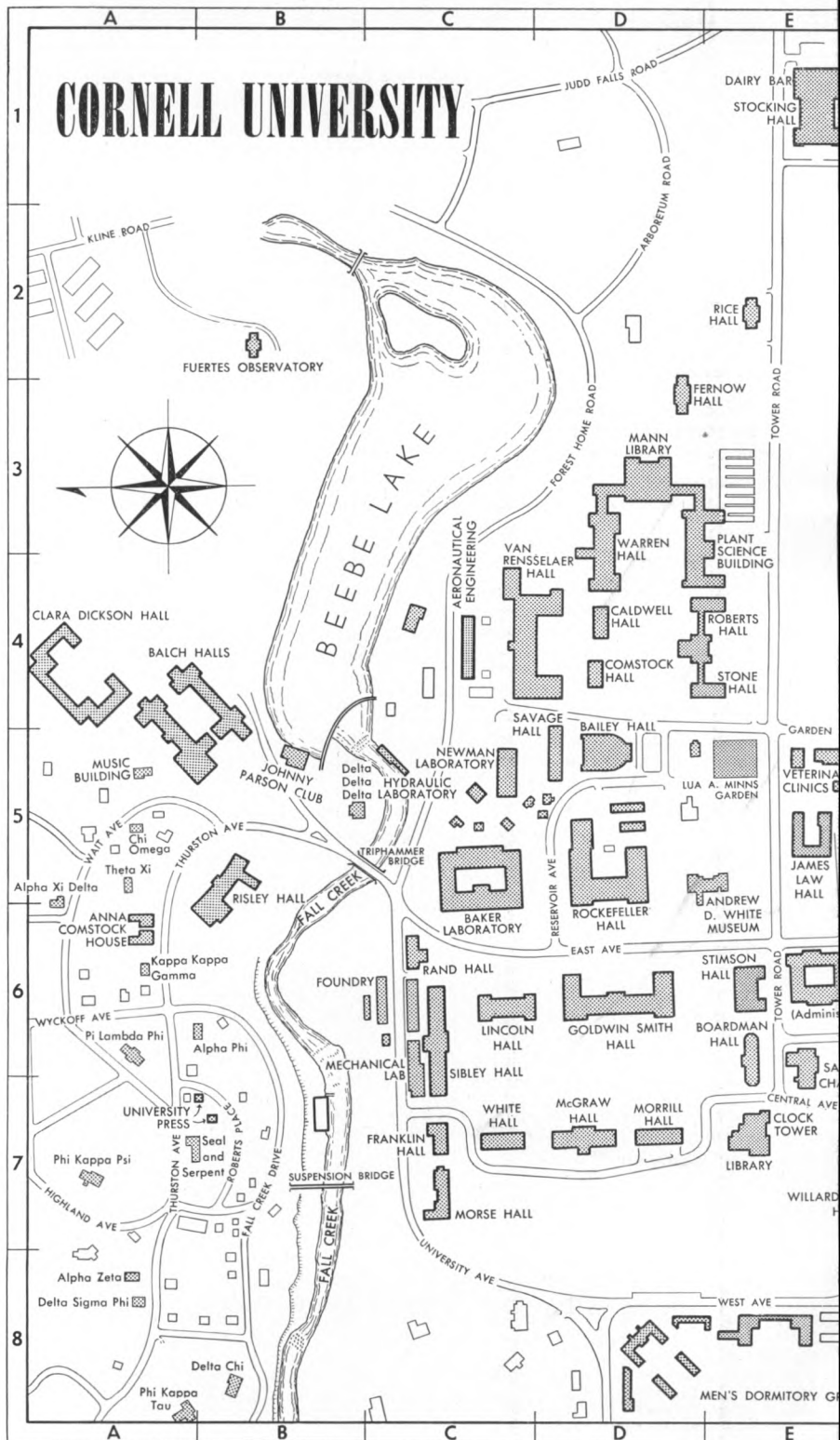
Astro. 30. *WORKSHOP IN THE TEACHING OF ASTRONOMY*. (See *Astronomy*, p. 48.)

RESEARCH

Educ. 199. *INFORMAL STUDY IN EDUCATION*. (U) Credit as arranged. Members of the staff of the School of Education.

Educ. 299. *EDUCATIONAL RESEARCH METHODS*. (G) 2 hours credit. For graduate students preparing for or engaged in research in education. Alternates with Course 251. M T W Th F 10. Warren 232. Mr. AHMANN.

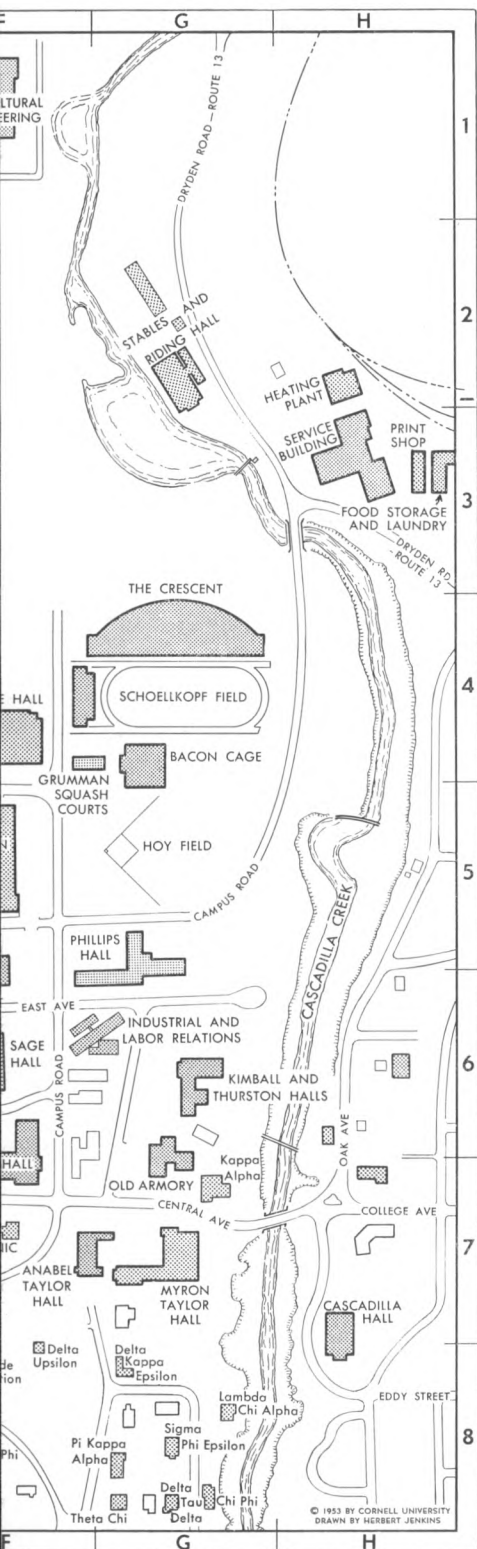
CORNELL UNIVERSITY



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A B C D E

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Key to Points of Interest

- Agricultural Engineering, F1
- Anabel Taylor Hall, F7
- Anna Comstock House, A6
- Bailey Hall, D5
- Balch Halls, B5
- Baker Laboratory, C5
- Barnes Hall, F6
- Barton Hall, F5
- Boardman Hall, E6
- Caldwell Hall, D4
- Cascadilla Hall, H7
- Clara Dickson Hall, A4
- Clinic, F7
- Comstock Hall, D4
- Edmund Ezra Day Hall, E6
- Fernow Hall, D3
- Foundry, C6
- Franklin Hall, C7
- Fuertes Observatory, B2
- Goldwin Smith Hall, D6
- Hydraulic Laboratory, C5
- Industrial and Labor Relations, G6
- James Law Hall, E5
- Johnny Parson Club, B5
- Kimball Hall, G6
- Library and Clock Tower, E7
- Lincoln Hall, C6
- Mann Library, D3
- McGraw Hall, D7
- Mechanical Laboratories, C6
- Men's Dormitory Group, E8
- Moore Laboratory, E5
- Morrill Hall, D7
- Morse Hall, C7
- Music Building, A5
- Myron Taylor Hall, G7
- Newman Laboratory, C5
- Olin Hall, F7
- Phillips Hall, G5
- Plant Science Building, E3
- Rand Hall, C6
- Rice Hall, E2
- Risley Hall, B5
- Roberts Hall, E4
- Rockefeller Hall, D5
- Sage Chapel, E6
- Sage Hall, F6
- Savage Hall, D5
- Sibley Hall, C6
- Statler Hall, F6
- Stimson Hall, E6
- Stocking Hall, E1
- Stone Hall, E4
- Teagle Hall, F4
- Thurston Hall, G6
- Van Rensselaer Hall, D4
- Warren Hall, D3
- White Hall, C7
- White Museum, E5
- Willard Straight Hall, E7
- Wing Hall, E1

Consideration of the basic research methods as applied to education and the principles of thesis writing.

Educ. 300. *SPECIAL STUDIES IN EDUCATION*. (G) Credit as arranged. Members of the staff of the School of Education.

Students working on theses or other research projects may register for this course. The staff members concerned must be consulted before registration.

SECONDARY EDUCATION AND CURRICULUM

[Educ. 33. *THE TEACHING OF ENGLISH IN SECONDARY SCHOOLS*. Not given in the 1955 Summer Session.]

[Educ. 130. *SOCIAL STUDIES IN THE SECONDARY SCHOOL*. Not given in the 1955 Summer Session.]

Educ. 276. *PRINCIPLES OF CURRICULUM BUILDING*. (G) 2 hours credit. M T W Th F 9. Warren 31. Mr. STUTZ.

The major problems, principles, and techniques in determining educational objectives and curriculum scope and content in elementary and secondary schools. Special attention will be given to recent developments in the curriculum. Opportunity will be afforded for work on individual problems.

Educ. 290. *SECONDARY EDUCATION*. (U,G) 2 hours credit. M T W Th F 8. Boardman 121. Mr. HIXON.

The nature, function, organization, curriculum, and extension of secondary education in its adaptations to present-day needs and conditions.

Astro. 30. *WORKSHOP IN THE TEACHING OF ASTRONOMY*. (See *Astronomy*, p. 48.)

Ag.Engr. 170. *HANDICRAFT FOR TEACHERS*. (See *Agricultural Engineering*, p. 21.)

Educ. 207. *THE TEACHING OF GENERAL SCIENCE IN THE SECONDARY SCHOOLS*. (See *Nature Study*, p. 30.)

Sp.&Dr. 231. *SPEECH FOR THE CLASSROOM TEACHER*. (See *Speech and Drama*, p. 37.)

Educ. 315. *READING IN THE SECONDARY SCHOOL AND COLLEGE*. (See *Educational Psychology*, p. 26.)

Educ. 318u. *WORKSHOP IN READING*. (See *Elementary Education*, p. 26.)

Arch. 324. *WORKSHOP FOR THE ART TEACHER*. (See *Painting*, p. 39.)

Sp.&Dr. 351. *TEACHERS' COURSE IN SPEECH CORRECTION*. (See *Speech and Drama*, p. 38.)

Educ. 433. *TEACHING HOMEMAKING AT THE SECONDARY SCHOOL LEVEL*. (See *Home Economics Education*, p. 29.)

READING IMPROVEMENT PROGRAM

As a service to all who are attending the Summer Session, the Cornell Reading Improvement Program will offer a four-week course of instruction designed to increase efficiency in reading rate and comprehension. In the past, teachers and others have enrolled in the program for the express purpose of improving their own reading abilities. The course will consist of three class sessions and two half-hour laboratory sessions per week. Individual conferences may be arranged by appointment. Registration for this course will be held in Stone 105, July 6, at 1 p.m. A registration fee of \$15 will be payable at this time.

ENGINEERING

CIVIL ENGINEERING

Engr. 2902. *ENGINEERING LAW*. (U) 3 hours credit. M T W Th F S 8. Lincoln 321. Mr. THATCHER.

An introductory course in the laws of contract, tort, agency, real property, water rights, forms of business organization, sales, and negotiable instruments; special emphasis on contract documents required on construction work; collateral topics such as workmen's compensation, mechanics' liens, arbitration, and patent law are also included.

Summer Survey Camp

The School of Civil Engineering conducts a Summer Survey Camp for instruction in surveying for the five-week period between the close of the Summer Session and the beginning of the fall term. The camp is located on Cayuta Lake about 20 miles west of Ithaca. Instruction is primarily for civil engineering students who have completed the basic surveying courses on the campus. Persons desiring additional information should write to Director of Camp Cornell, School of Civil Engineering, Cornell University, Ithaca, N.Y.

ENGINEERING MECHANICS

Engr. 1152. *MECHANICS OF ENGINEERING—DYNAMICS*. (U) 3 hours credit. Prerequisites, 1151 and Mathematics 163. M T W Th F S 10, W 1-2:30. Thurston Hall. Instructor to be announced.

The principles of dynamics of particles and rigid bodies. Rectilinear, curvilinear, rotational, and general plane motion of rigid bodies. Impulse-momentum, work-energy, virtual work. Text: Housner & Hudson, *Applied Mechanics—Statics*.

Engr. 1153. *STRENGTH OF MATERIALS*. (U) 3 hours credit. Prerequisites, 1151 and parallel registration in 1152. M T W Th F S 9, M 1-2:30. Thurston Hall. Instructor to be announced.

Stress and strain, tension, compression and shear, riveted and welded joints, elementary beam theory, combined stresses, columns, strain energy beams on several supports. Text: H. D. Conway, *Mechanics of Materials*.

Engr. 1155. *APPLIED MATHEMATICS*. (U) 3 hours credit. Prerequisites, 1152 and 1153. M T W Th F S 11, W 1-2:30. Thurston Hall. Instructor to be announced.

The formulation and solution of problems arising in mechanical engineering which involve the use of elementary differential equations and Fourier Series. Emphasis is placed on numerical as well as analytical methods of solution.

ENGLISH, SPEECH AND DRAMA

ENGLISH

Engl. 301. *INTRODUCTION TO DRAMA*. (U) 2 hours credit. M T W Th F 11. Goldwin Smith 156. Mr. LINN.

Representative plays from the Greeks to recent times.

Engl. 309. *MASTERPIECES OF MEDIEVAL FICTION*. (U,G) 2 hours credit. M T W Th F 12. Goldwin Smith 236. Mr. FOGEL.

The romances of Chrétien de Troyes, Chaucer's *Troilus and Criseyde*, and Sir Thomas Malory's Arthurian tales studied as examples of medieval narrative art and as mirrors of medieval values. Chrétien's and Chaucer's narratives will be read in modern English versions.

Engl. 313. *THE EARLIER EIGHTEENTH CENTURY*. (U,G) 2 hours credit. M T W Th F 9. Goldwin Smith 236. Mr. ABRAMS.

Major writers, from Pope and Swift to Thomas Gray; the relation of this literature to the criticism and intellectual currents of the time.

Engl. 318. *WORDSWORTH AND COLERIDGE*. (U,G) 2 hours credit. M T W Th F 12. Goldwin Smith 134. Mr. DONOVAN.

The poetry of Wordsworth and Coleridge considered in relation to their poetic theory.

Engl. 324. *MODERN BRITISH LITERATURE, 1890-1914*. (U,G) 2 hours credit. M T W Th F 10. Goldwin Smith 324. Mr. PARRISH.

The emphasis in this course is on the ways in which such writers as Hopkins and Housman, Shaw and Wilde, Wells and Conrad changed Victorian attitudes and influenced our own.

Engl. 333. *THE EIGHTEENTH-CENTURY NOVEL*. (U,G) 2 hours credit. M T W Th F 8. Goldwin Smith 236. Mr. ZALL.

The development of the novel, studied in selected works of Fielding, Goldsmith, Sterne, Smollett, and Jane Austen, with optional reading in Defoe, Richardson, and Walpole.

Engl. 335. *THE MODERN AMERICAN NOVEL*. (U,G) 2 hours credit. M T W Th F 11. Goldwin Smith 124. Mr. SALE.

A critical study of a selected group of American novelists, including Hemingway, Fitzgerald, Marquand, Faulkner, and Robert Penn Warren.

Engl. 339. *THE DRAMATIC MONOLOGUE*. (U,G) 2 hours credit. M T W Th F 9. Goldwin Smith 134. Mr. LANGBAUM.

Dramatic monologues by Browning, Tennyson, T. S. Eliot, and others. The dramatic monologue will be studied in relation to other forms of nineteenth- and twentieth-century poetry.

Engl. 349. *RECENT AMERICAN POETRY*. (U,G) 2 hours credit. M T W Th F 8. Goldwin Smith 190. Mr. HAZARD ADAMS.

American poets of this century, including, among others, Eliot, Pound, Crane, Stevens, Williams, and Ransom. Texts: Louis Untermeyer, *Modern American Poetry*; John Ciardi, *Mid-Century American Poets*.

Engl. 369. *SHAKESPEARE*. (U,G) 2 hours credit. M T W Th F 10. Goldwin Smith 156. Mr. KEAST.

The comedies and tragicomedies; a critical consideration of representative plays and of their place in the development of Elizabethan drama.

Engl. 373. *MILTON*. (U,G) 2 hours credit. M T W Th F 11. Goldwin Smith 236. Mr. ROBERT ADAMS.

A study of the poet's literary development as revealed in selected minor poems, followed by a reading of *Paradise Lost*.

Engl. 382. *THE ENGLISH LANGUAGE*. (U,G) 2 hours credit. M T W Th F 12. Goldwin Smith 164. Mr. CHAPMAN.

The development of English sounds, forms, and meanings. Particular attention will be given to the usefulness of linguistic knowledge for writing or the teaching of writing. Text: Stuart Robertson, *The Development of Modern English*, 2d ed., rev. by F. G. Cassidy, 1954.

Engl. 386. *CREATIVE WRITING*. (U,G) 2 hours credit. M Th 2-4. Goldwin Smith 236. Mr. HATHAWAY.

Particular emphasis upon writing short stories and poetry, though other kinds of writing may be undertaken. Analysis of students' writing, study of models and trends, personal conferences.

Engl. 397. *TRAGEDY AND THE TRAGIC VIEW OF LIFE*. (U,G) 2 hours credit. M T W Th F 9. Goldwin Smith 156. Mr. MYERS.

A study of the theory of tragedy and of representative examples.

Engl. 909. *SPECIAL TOPICS FOR INVESTIGATION*. (G) 2 hours credit. Conferences to be arranged.

For graduate students writing Master's essays or engaging in special research. The course is administered by various members of the staff. Students who wish to be put in touch with a suitable director for the work they have in mind may write to or consult Prof. H. A. Myers.

SPEECH AND DRAMA

Sp.&Dr. 101. *PUBLIC SPEAKING*. (U) 2 hours credit. M T W Th F 11. Goldwin Smith 26. Mr. WICHELS.

Practice in speechmaking on topics of current interest. Methods of preparation and delivery studied as a guide to practice; class discussions; conferences. Regular students passing the course are admitted to Speech and Drama 202 and 213. Textbook: McBurney and Wrage, *Art of Good Speech*.

Sp.&Dr. 121. *AN INTRODUCTION TO THE THEATRICAL ARTS*. (U,G) 2 hours credit. M T W Th F 11. Morse, Stage Laboratory. Mr. CREPEAU.

A survey of the elements of dramatic communication, with the primary objective of understanding, appreciation, and rational enjoyment of the theatre in its various forms. Some attention will be paid to such extensions of theatre as the film and the radio; no experience in dramatic production is required. Lectures, readings, demonstrations, field trips.

Sp.&Dr. 131. *VOICE TRAINING*. (U,G) 2 hours credit. M T W Th F 9. Goldwin Smith 21. Mr. ROBERT ALBRIGHT.

An elementary course for the improvement of the speaking voice. Individual and group practice in overcoming such faults as nasality, weak quality, and indistinctness. Attention to the principles of voice production. Students with special vocal problems are advised to take this course before Course 101. Textbook: Anderson, *Training the Speaking Voice*.

Sp.&Dr. 203. *PRINCIPLES AND PATTERNS OF ORAL DISCOURSE*. (U,G) 2 hours credit. M T W Th F 9. Goldwin Smith 26. Mr. WICHELS.

Study of the distinctive characteristics of selected forms of speechmaking: the speech of counsel or inspiration, the lecture or commentary, and parliamentary debate and discussion. Approximately half the work of the course will be devoted to practice in composition and oral presentation, and there will be supplementary readings and lectures.

Sp.&Dr. 231. *SPEECH FOR THE CLASSROOM TEACHER*. (U,G) 2 hours credit. M T W Th F 12. Goldwin Smith 21. Mr. AUSTEN.

Designed to help teachers in elementary and secondary schools improve in the speech skills and forms of communication they constantly use: oral exposition, dialogue and recitation, discussion, reading aloud, public speaking. Study of principles; constant practice; conferences on individual needs. Textbook: Sorrenson, *Speech for the Teacher*.

Sp.&Dr. 290. *THESES AND SPECIAL PROBLEMS IN PUBLIC ADDRESS*. (G) 2 or more hours credit. Mr. WICHELS.

Required of regularly registered Summer Session graduates working on theses. Open to other graduates prepared for independent study of special topics in rhetoric and public speaking.

Sp.&Dr. 351. *TEACHERS' COURSE IN SPEECH CORRECTION*. (U,G) 2 hours credit. M T W Th F 10. Goldwin Smith 21. Mr. ROBERT ALBRIGHT.

Principles and methods for helping students with speech and hearing difficulties. Practical therapy for the classroom teacher, with emphasis on the prevention of defects. Textbook: Johnson, et al., *Speech Handicapped School Children*.

Sp.&Dr. 390. *THESES AND SPECIAL PROBLEMS IN SPEECH TRAINING AND PHONETICS*. (G) 2 or more hours credit. Mr. ROBERT ALBRIGHT.

Required of regularly registered Summer Session graduates working on theses. Open to other graduates prepared for the independent study of special topics in speech training and phonetics.

Sp.&Dr. 401. *DRAMATIC PRODUCTION: DIRECTION*. (U,G) 2 hours credit. M T W Th F 10. Morse, Stage Laboratory. Mr. STANTON.

Theory of stage direction; fundamentals of theatrical mounting; survey of practical phases of production. Prerequisite for further work in dramatic production. Textbook: Dolman, *Art of Play Production*.

Sp.&Dr. 421. *DRAMATIC INTERPRETATION AND ACTING*. (U,G) 2 hours credit. M W F 2-4. Goldwin Smith 24. Mr. DARKES ALBRIGHT.

A practice course in oral interpretation, pantomime, acting, and group rehearsal. Textbook: Albright, *Working Up a Part*.

Sp.&Dr. 433. *THEATRE PRACTICE*. (U,G) 2 hours credit. Hours to be arranged. Mr. CREPEAU.

Technical practice coordinated with the laboratory and studio productions of the Summer Theatre; demonstrations; readings in the techniques involved.

Sp.&Dr. 455. *AMERICAN DRAMA AND THEATRE*. (U,G) 2 hours credit. M T W Th F 11. Goldwin Smith 224. Mr. DARKES ALBRIGHT.

A study of the American theatre and of representative American plays from the Colonial period to the present. Emphasis is on the drama as a reflection of cultural history and, in turn, as a cultural influence. Textbook: Hughes' *A History of the American Theatre: 1700-1950*.

Sp.&Dr. 480. *THE MOTION PICTURE: A SURVEY*. (U,G) 2 hours credit. M T W Th F 12. Morse, Stage Laboratory. Mr. STANTON.

The development of the motion picture as a modern art. Characteristic problems and devices of the art; economic and social aspects; the documentary film; the educational film. Numerous films will be viewed. Students are urged to attend the film programs of the Summer Theatre.

Sp.&Dr. 490. *THESES AND SPECIAL PROBLEMS IN DRAMA AND THE THEATRE*. (G) 2 or more hours credit. Messrs. STANTON and DARKES ALBRIGHT.

Required of regularly registered Summer Session graduates working on theses. Open to other graduates prepared for the independent study of special topics in drama and the theatre.

SPEECH CLINIC. For students working under the direction of the Department. Mr. ROBERT ALBRIGHT. By appointment. No credit.

Students may elect a major and/or minor with emphasis on (1) Public Address, (2) Phonetics and Speech Training, (3) Drama and the Theatre. For students plan-

ning a program of graduate studies in successive summers, advanced courses in each of these three areas are offered in alternating sessions and special provision is made for directed independent study.

FINE ARTS

ART: HISTORY AND APPRECIATION

Art 102. *INTRODUCTION TO RENAISSANCE AND MODERN ART.* (U,G) 2 hours credit. M T W Th F 12. Goldwin Smith Museum. Mr. WAAGE.

The relationship of art to society in Western Europe from 1400 to the present, as exemplified in the works of the major painters and sculptors.

Art 507. *TWENTIETH CENTURY ART.* (U,G) 2 hours credit. M T W Th F 10. Goldwin Smith 35. Mr. WAAGE.

The consequences of the divorce of painting and sculpture from social function; painters' painting and expressionism; individualistic and clique vagaries; attempts toward reintegration.

MUSIC

Music 101. *THE ART OF MUSIC.* (U) 2 hours credit. M T W Th F 10. Music Building 6. Mr. SMITHER.

An approach to the understanding and rational enjoyment of the art of music. Offered especially for students who have had no technical training in the subject. Most of the outside work consists of listening to phonograph records.

Music 109. *MUSIC IN THE ELEMENTARY SCHOOL.* (U,G) 2 hours credit. M T W Th F 9. Music Building 6. Mr. CAMPBELL.

Designed for elementary school teachers who are required to teach music with or without the assistance of the music supervisor. Includes survey of literature, rote singing, sight-reading and part-singing, elementary theory and appreciation, and simple piano accompaniment.

PAINTING

Arch. 300. *PAINTING AND COMPOSITION.* (U,G) 2 hours credit. M T W Th F 8-10. Morse 101. Instructor to be announced.

A studio course dealing with the fundamentals of painting. In the study of some of the principal considerations of modern art, the classroom assignments progress from simple to more complex pictorial organizations. Though not an elementary presentation, the course has no prerequisites and is open to both beginners and intermediate students. Media: tempera and casein.

Arch. 309. *PAINTING AND COMPOSITION.* (U,G) 2 to 6 hours credit. Registration by permission of the instructor. May be repeated for credit. M T W Th F 10-12. Morse 120. Instructor to be announced.

A studio course for those who have had considerable experience in drawing and painting.

Arch. 324. *WORKSHOP FOR THE ART TEACHER.* (G) 2 hours credit. M T W Th F 10-12. Room to be assigned. Instructor to be announced.

Combines seminar and studio course. Problems of materials and methods for teaching art in primary and secondary schools; for those who have art teaching experience as well as those who are teaching art in the primary grades for the first time. Individual needs are considered, and opportunity for discussion is provided. Part of the course is given to planning art curricula and to methods of presentation and emphasis.

HOME ECONOMICS

CHILD DEVELOPMENT AND FAMILY RELATIONSHIPS

*C.D.&F.R. 303. *HISTORY AND PHILOSOPHY OF EARLY CHILDHOOD EDUCATION*. (U,G) 2 hours credit. M T W Th F 11. Van Rensselaer 121. Miss REEVES.

The educational position of the young child in twentieth-century America; the views of social philosophers, notably Rousseau, Pestalozzi, and Froebel, concerning the problems of early childhood; family education in America out of which evolved the kindergarten and nursery school; folk movements emphasizing the significance of the child, such as the Child Study Movement, the Child Health and Hygiene Movement, and the Parent Education Movement. Fee, \$2.

*C.D.&F.R. 315. *CHILD DEVELOPMENT*. (U,G) 2 hours credit. M T W Th F 9. Van Rensselaer G62. Mr. SHIRE.

The aim of this course is to give the student an understanding of the structure, function, and development of the growing human being as the result of interplay between biological, psychological, and social factors. Course material is drawn from the pertinent behavioral sciences. Fee, \$2.

*C.D.&F.R. 322. *PSYCHOLOGY OF PARENTS AND TEACHERS*. (U,G) 2 hours credit. M T W Th F 10. Van Rensselaer 339. Mr. BALDWIN.

A study of various factors influencing the behavior of people in the position of parent or teacher and the relationship between personality factors and the behavior of parents toward children. The course will include some study of the effects of the parent-child relationship upon the parent. Fee, \$2.

C.D.&F.R. 334u. *WORKSHOP: CARE OF YOUNG CHILDREN IN NEW YORK STATE MIGRANT CAMPS*. Presession, June 15 to June 29. (U,G) 2 hours credit. Hours to be arranged. Limited to 15 students. Miss EDWARDS.

An intensive study of the problems relevant to the group care of children of migrant camp families. Emphasis will be placed upon the development of a program of child care and guidance to meet the special conditions. Students will be helped to deepen their understanding of the home conditions of migrant families and of the growth and development of young children. Tuition, \$50. Those interested should apply to Miss Frances McKnight, Box 86, Homer, New York, by May 16, 1955. Students will be notified of their acceptance.

*C.D.&F.R. 351. *CHILDREN'S LITERATURE*. (U,G) 2 hours credit. M T W Th F 9. Van Rensselaer 121. Miss REEVES.

Literature as a resource in children's living. The relation of children's literature to world literature. Traditional and modern forms. Illustration in children's books. Reading interests of children two to twelve. Fee, \$2.

*C.D.&F.R. 360. *PSYCHODYNAMICS OF HUMAN BEHAVIOR*. (U,G) 2 hours credit. M T W Th F 12. Van Rensselaer G62. Mr. SHIRE.

The motivating forces in human behavior. Both conscious and unconscious processes directing behavior will be considered. Special attention will be given to learning and change in motivation as these relate to the tasks of teacher and parent. Fee, \$2.

*C.D.&F.R. 363. *HUMAN RELATIONS IN THE FAMILY*. (U,G) 2 hours credit. M T W Th F 10. Van Rensselaer 121. Mr. BURROUGHS.

Principles of democratic human relationships in family living. Special attention will be given to husband-wife, parent-child, and sibling relationships and to interre-

lations of the younger, middle, and older generations at successive stages in the family cycle. Fee, \$2.

*C.D.&F.R. 370. *MARRIAGE*. (U,G) 2 hours credit. M T W Th F 11. Van Rensselaer 117. Mr. BURROUGHS.

Designed to acquaint the student with the growing body of scientific knowledge concerning marriage, the experiences that precede it, and the adjustments, satisfactions, and problems growing out of it. Such topics as the following will be discussed: emotional and social maturity and readiness for marriage; personality and social factors in marriage adjustment; sex life in marriage; pregnancy and parenthood; the married woman and outside employment; marital failure and divorce; sources of help for troubled marriages. Fee, \$2.

*C.D.&F.R. 381. *THE TEACHER AS COUNSELOR*. (U,G) 2 hours credit. M W 2-4:30. Van Rensselaer 121. Mr. FELDMAN.

A survey will be made of those theories and methods most applicable to the teacher's role as both individual and group counselor. Teaching methods will include lectures, discussions, readings, films, case illustrations, and demonstrations. Fee, \$2.

*C.D.&F.R. 403. *SPECIAL PROBLEMS FOR GRADUATE STUDENTS*. (G) Credit and hours to be arranged. Registration with permission of the instructor. Department staff.

For graduate students recommended by their chairmen and approved by the head of the department and the instructor in charge for independent, advanced work. Fee dependent on the nature of the problem.

*C.D.&F.R. 407. *THESIS AND RESEARCH IN CHILD DEVELOPMENT AND FAMILY RELATIONSHIPS*. (G) 1 to 6 hours credit. Registration by permission of the instructor. Hours by arrangement. Department staff.

This is planned for students who are ready to undertake their own research and theses. Fee dependent on the nature of the problem.

*C.D.&F.R. 475. *METHODS IN FAMILY LIFE EDUCATION*. (U,G) 2 hours credit. T Th 2-4:30. Van Rensselaer 124. Mr. FELDMAN.

Designed to acquaint students with the objectives and methods of family life education. A variety of methods, such as the lecture, group discussion, role taking, and panel, and their applicability to a variety of situations and media will be discussed. In addition to class meetings, students will take part in one or more practical demonstrations either in college classes, community groups, leadership training sessions, or radio programs. Fee, \$2.

ECONOMICS OF THE HOUSEHOLD AND HOUSEHOLD MANAGEMENT

*Ec.Hs. 310. *MANAGEMENT IN FAMILY LIVING*. (U,G) 2 hours credit. Discussion group projects, and field trips, T Th 1-4. Van Rensselaer G-19. Miss KNOLL.

The ways in which various families use their available resources to attain their purposes. An opportunity to work with family members in their homes on solving some of their management problems. Simplification of work as one means of managing. Demonstrations, motion pictures, slides, photographs, and work centers set up in the laboratory. Opportunity for preparing illustrative material. One all-day tour, time to be arranged. Fee, \$6.

*Ec.Hs. 320. *MANAGEMENT IN RELATION TO HOUSEHOLD EQUIPMENT*. (U,G) 2 hours credit. M 2, W F 2-4, and two hours for laboratory practice to be arranged at the student's convenience. Van Rensselaer G-19. Mrs. WILLIAMSON.

Selection, use, care, and repair of household equipment in relation to individual situations. Relative advantages of various types of equipment in performing certain tasks. Trips to homes and retail stores. Selection and use of home appliances in school situations. Fee, \$3.

*Ec.Hs. 330. *MANAGEMENT IN RELATION TO PERSONAL FINANCES*. (U,G) 2 hours credit. M T W Th F 8. Van Rensselaer 121. Miss KNOLL.

The management procedure applied to individual and family problems involving finances. The influence of economic conditions, as well as personal circumstances, on one's financial situation. The effect of standards of living on the amount spent. Problems connected with estimating future expenditures. Considerations in developing a savings program and in purchasing insurance. The nature of investments in real estate and government and corporate securities. Advantages and disadvantages in the use of credit; variations among credit agencies. Problems in arranging for transfer of property to heirs. Various types of records helpful in managing. Fee, \$2.

*Ec.Hs. 403. *SPECIAL PROBLEMS IN ECONOMICS OF THE HOUSEHOLD AND HOUSEHOLD MANAGEMENT*. (G) Credit and hours to be arranged. Registration by permission. Department staff.

For graduate students recommended by their chairmen and approved by the head of the department and the instructor in charge for independent, advanced work. Fee will be dependent on the nature of the problem.

*Ec.Hs. 407. *THESIS AND RESEARCH IN ECONOMICS OF THE HOUSEHOLD AND HOUSEHOLD MANAGEMENT*. (G) Credit and hours to be arranged. Registration with permission of the instructor. Department staff.

Fee will be dependent on the nature of the problem.

HOME ECONOMICS EDUCATION

(See *Education*, p. 29)

FOOD AND NUTRITION

*F.&Ntr. 326. *MODERN THEORY AND PRACTICE IN FOOD PREPARATION*. (U,G) 2 hours credit. Prerequisite, college course in food preparation. Planned primarily for teachers, extension workers, and dietitians who wish to increase their understanding of up-to-date principles of food preparation. M T W Th F 8. Van Rensselaer 352. Miss FENTON.

A lecture-demonstration course designed to help the student understand the modern concepts of food preparation. Demonstrations will illustrate selected effects of different procedures of food preparation. As part of the preparation for class discussion, students taking this course will be expected to spend, during the six-week period, 12 hours outside class time in laboratory preparation, the hours to be arranged at the convenience of the student. Fee, \$5.

F.&Ntr. 329. *RECENT FINDINGS IN NUTRITION*. (U,G) 2 hours credit. Prerequisite, a college course in nutrition. Lectures and discussion, M T W Th F 11. Van Rensselaer 339. Miss STEININGER.

F.&Ntr. 329u-1. *RECENT FINDINGS IN NUTRITION*. (U,G) July 5-July 23. 1 hour credit.

F.&Ntr. 329u-2. *RECENT FINDINGS IN NUTRITION*. (U,G) July 25-August 13. 1 hour credit.

Students may register for 3 weeks only as a unit, credit 1 hour, or for the en-

tire course, credit 2 hours. Students who elect to register for either unit will register for 329u-1 or 329u-2.

Planned for teachers, extension workers, and dietitians who wish to bring their information about nutrition up-to-date. The topics discussed will be those which are related to practical problems in nutrition. (See p. 8 regarding tuition for unit courses.)

*F.&Ntr. 351. *HOME FREEZING OF FOODS AND THEIR USE.* (U,G) 2 hours credit. Prerequisite, college course in food preparation. Planned primarily for teachers, dietitians, and home service representatives who wish to understand the principles of food freezing and the use of frozen foods. M W F 9. Van Rensselaer 339; T Th 9-11. Van Rensselaer 352. Miss FENTON.

A general course outlining the basic principles of food freezing. The freezing of vegetables, fruits, fruit juices, meats, poultry, fish, prepared and precooked foods; bacteriological aspects; quality control; storage; cooking; nutritive value; economic aspects.

Laboratory work will include the freezing and serving of frozen foods. The effect of variety of fruits and vegetables, method of blanching vegetables, sweetening agents, and anti-browning agents will be studied. Prepared and precooked foods will be studied. Fee, \$15.

[F.&Ntr. 403. *SPECIAL PROBLEMS FOR GRADUATE STUDENTS.* Not offered in the 1955 Summer Session.]

[F.&Ntr. 407. *THESIS AND RESEARCH.* Not offered in the 1955 Summer Session.]

HOUSING AND DESIGN

*H.&Des. 403. *SPECIAL PROBLEMS FOR GRADUATE STUDENTS.* (G) Credit and hours to be arranged. Department staff.

For graduate students recommended by their chairmen and approved by the head of the department and the instructor in charge for independent, advanced work. Fee will be dependent on the nature of the problem.

[H.&Des. 407. *THESIS AND RESEARCH.* Not offered in the 1955 Summer Session.]

*H.&Des. 445. *WORKSHOP IN HOUSING AND DESIGN.* (G) 6 hours credit. Preregistration desired. M T W Th F 9-12 and 1:00-3:30. Van Rensselaer 317, 318, 322, and 327. Mr. ARNOLD and Mr. MONTGOMERY.

*H.&Des. 445u-1. *WORKSHOP IN HOUSING AND DESIGN.* (G) July 5-July 23. 3 hours credit.

*H.&Des. 445u-2. *WORKSHOP IN HOUSING AND DESIGN.* (G) July 25-August 13. 3 hours credit.

Students may register for 3 weeks only as a unit, credit 3 hours, or for the entire course, credit 6 hours. Students who elect to register for either unit will register for 445u-1 or 445u-2.

The aim is to provide an opportunity for college and secondary-school teachers, extension personnel, graduate students, and journalists to study a number of basic problems in the general area of housing. The workshop is planned for professional people interested in studying housing from the point of view of family living. Analytical and technical considerations will be coordinated—a unique feature of the workshop.

Areas for concentrated study will be selected from and governed by the needs

and interests of the workshop group. There will be opportunity to consider many interrelated facets of housing and the processes of architectural design. These may include goals, needs, activities of the contemporary family; site, technical and structural aspects of houses; interior design and furnishings; current research findings in the socio-psychological, economic, and technical aspects of housing.

Although the treatment will be integrated, the first unit of three weeks will deal largely with neighborhood and architectural considerations. The second three-week unit will be largely in interior design and furnishings. The entire course will stress the basic relationships between wholesome family living and satisfactory housing.

Mornings will be devoted to lectures and discussion sessions, and afternoons to demonstrations, studio work, and individual consultations. This workshop will be staffed by a designer, a social scientist, and a studio assistant. Guest lecturers in the fields of psychology, design, finance, and consumer economics will participate. Pertinent field trips will be scheduled. Fee, \$25 for six weeks, or \$13 for one three-week unit. (See also p. 8 regarding tuition for unit courses.)

INSTITUTION MANAGEMENT

*I.Mgt. 320u. *WORKSHOP: CURRENT DEVELOPMENTS IN INSTITUTION FOOD SERVICE ADMINISTRATION.* (G) 2 hours credit. July 5-July 23. M T W Th F 1:30-4:30. Van Rensselaer 3M11. Miss GLEISER and Miss LONGREE.

For food administrators and dietitians who are interested in bringing themselves up to date. Prerequisites, undergraduate preparation in institution management and/or dietetics and experience in food administration. Three observation periods and/or field trips will be scheduled in addition to regular class meetings. Typical problems are personnel supervision, food cost control, and food sanitation. Individual needs are considered, and opportunity for discussion is provided. Registration with permission of the instructor. Estimated cost of trips, \$6 to \$10 total. Fee, \$3. (See also p. 8 regarding tuition for unit courses.)

*I.Mgt. 330. *PROCEDURES AND TECHNIQUES IN QUANTITY FOOD PREPARATION.* (G) 4 hours credit. Lectures, demonstrations, and laboratories. M T W Th F 1:30-4:30. Van Rensselaer 170 and 172. Miss CUTLAR and Miss M. HARRIS.

*I.Mgt. 330u-1. *PROCEDURES AND TECHNIQUES IN QUANTITY FOOD PREPARATION.* (G) July 5-July 23. 2 hours credit.

*I.Mgt. 330u-2. *PROCEDURES AND TECHNIQUES IN QUANTITY FOOD PREPARATION.* (G) July 25-August 13. 2 hours credit.

Students may register for 3 weeks only as a unit, credit 2 hours, or for the entire course, credit 4 hours. Students who elect to register for either unit will register for 330u-1 or 330u-2.

Four observation periods in the Home Economics kitchen will be scheduled in addition to the regular class sessions. Prerequisite, a college course in food preparation. The first three weeks will deal with basic procedures and techniques employed in quantity food production. In the second three weeks, consideration will be given to some of the newer trends in quantity food preparation, new products, comparative quality, and costs. Registration with permission of the instructor. Fee, \$8 for 3 weeks; \$12 for 6 weeks. (See also p. 8 regarding tuition for unit courses.)

[I.Mgt. 403. *SPECIAL PROBLEMS FOR GRADUATE STUDENTS*. Not offered in the 1955 Summer Session.]

[I.Mgt. 407. *THESIS AND RESEARCH*. Not offered in the 1955 Summer Session.]

TEXTILES AND CLOTHING

*T.&Clo. 215. *FITTING AND PATTERN MAKING*. (U;G by permission) 2 hours credit. Registration limited to twenty students. Preregistration desirable. Prerequisites, experience or course work in the area of clothing design and construction acceptable to the instructor. M T W Th F 2-4. Van Rensselaer 217. Miss STOUT.

Planned to give a background of pattern making as it relates to design, fitting, and pattern alteration. A basic pattern is drafted from individual measurements, and on that basic pattern the rest of the laboratory work is planned. One dress is planned, the pattern made, and construction carried through to completion. Materials to be provided by the student at an estimated cost of \$15 to \$35. Fee, \$5.

*T.&Clo. 250. *DRAPING: FITTING AND CONSTRUCTION*. (U; G by permission) 2 hours credit. Registration limited to eighteen students. Preregistration desirable. Prerequisite, professional experience or course work in the area of clothing design and construction acceptable to the instructor. M T W Th F 2-4. Van Rensselaer 234. Miss SINGLETON.

Laboratory work on preparation of a dress form as a basis for use in developing original designs. Two or three garments will be draped, and one may be carried through to completion. Materials to be provided by the student at an estimated cost of \$15 to \$35. Fee, \$5.

*T.&Clo. 340. *ADVANCED DRESSMAKING*. (U;G by permission) 2 hours credit. Registration limited to sixteen students. Preregistration desirable. Prerequisites, experience or course work in the area of clothing design and construction acceptable to the instructor. M T W Th F 10-12. Van Rensselaer 234. Miss SINGLETON.

Advanced construction methods. Emphasis on design, finishing details, and handling unusual fabrics. Two or three garments may be planned and one carried through to completion. Materials to be provided by the students at an estimated cost of \$20 to \$35. Fee, \$5.

*T.&Clo. 373. *NEW DEVELOPMENTS AND TRENDS IN TEXTILES*. (U; G by permission) 2 hours credit. Preregistration desirable. M T W Th F 8-10. Van Rensselaer 278. Miss STOUT.

For students who have some knowledge of textiles and who wish information on new developments, particularly those of importance to consumers. Emphasis on new fibers, fabrics, and finishes. Practical problems in recognition, use, and care will be studied in the laboratory. Fee, \$5.

*T.&Clo. 401. *RESEARCH METHODS IN TEXTILES AND CLOTHING*. (G) 2 hours credit. M T W Th F 12. Van Rensselaer 216. Mrs. SMITH.

Discussion of methods of choosing a research problem including a review of various areas of possible research in textiles and clothing. Each student will carry out a minor research problem under the direction of the staff member and report her progress to the class at various stages. Fee, \$2.

*T.&Clo. 403. *SPECIAL PROBLEMS IN TEXTILES AND CLOTHING*. (G) Credit and hours as arranged. Registration by permission. Department staff.

For graduate students recommended by their chairmen and approved by the department head. Students to assume any expense involved unless otherwise previously arranged. Fee will be dependent on the nature of the problem.

*T.&Clo. 407. *THESIS AND RESEARCH*. (G) Credit and hours as arranged. Registration by permission. Department staff.

Fee will be dependent on the nature of the problem.

*T.&Clo. 500u. *WORKSHOP: TEXTILES AND CLOTHING IN THE HOMEMAKING PROGRAM*. (G) 3 hours credit. This course constitutes a full program for three weeks. *July 5-July 23*. Registration limited to twenty students. Preregistration desirable. M T W Th F. Hours to be arranged, first class meeting at 9 a.m., July 6. Van Rensselaer 215. Miss BLACKWELL (Department of Home Economics Education) and Miss SPRATT (Department of Textiles and Clothing).

Planned for experienced teachers in schools and extension. Emphasis on the place of textiles and clothing in the homemaking program for adolescents and on teaching methods appropriate to that area. Organized around types of projects suited to pupils of various age levels with attention given to selection of material, equipment, management problems, development of good work habits. Students will have opportunity for planning projects, preparing illustrative material, and observing demonstration classes for junior high school pupils. Materials to be provided by the student. Fee, \$5.

HOTEL ADMINISTRATION

In 1922, Cornell University established, with the cooperation and financial assistance of the American Hotel Association, a four-year course in hotel administration for high school graduates desiring to enter the administrative departments of the hotel business. Many hotel proprietors and managers who have been unable to take a four-year university course have asked for shorter courses with less formal entrance requirements.

To meet this demand, the Summer Session work in hotel administration is given in unit courses, one to three weeks in length. A circular giving full details of these courses has been issued and will be sent upon request. For this circular, for other information about the work in this department, and for admission to these courses, address Professor H. B. Meek, Statler Hall, Cornell University.

INDUSTRIAL AND LABOR RELATIONS

I.&L.R. 260. *PERSONNEL ADMINISTRATION*. (U,G) 2 hours credit. M T W Th F 9. I.&L.R. Bldg. 10A. Mr. RISLEY.

A study of the ways of working with employees, as individuals and in groups, to ensure the best use of individual capacities, the greatest amount of personal and group satisfaction, and maximum service to the employing organization. Consideration is given to the development and organization of personnel administration, factors influencing the administration and appraisal of personnel functions, including recruitment, selection, placement, training and communications, job evaluation, compensation, performance rating, transfer, promotion, separation, employee services, health and safety, records and reports, and research.

I.&L.R. 293. *SURVEY OF INDUSTRIAL AND LABOR RELATIONS*. (U,G) 2 hours credit. M T W Th F 9. I.&L.R. Bldg. 22. Mr. PERLMAN.

The course will include an analysis of the major problems in industrial and labor relations: labor union history, organization, and operation; labor market analysis and employment practices; industrial and labor legislation and social

security; personnel management and human relations in industry; collective bargaining; mediation and arbitration; the rights and responsibilities of employers and employees; the major governmental agencies concerned with industrial and labor relations.

I.&L.R. 400. *COLLECTIVE BARGAINING TODAY*. (U,G) 2 hours credit. M T W Th F 11. I.&L.R. Bldg. 10A. Mr. WINDMULLER.

Analysis of substantive issues in labor relations, including a survey of the techniques and scope of contract making, with consideration of the problems growing out of administration, application, and interpretation of the collective agreement.

I.&L.R. 442. *ECONOMICS OF THE LABOR MARKET*. (U,G) 2 hours credit. M T W Th F 12. I.&L.R. Bldg. 22. Mr. FERGUSON.

Examination of wage and employment problems in the individual firm, the industry, and the economy. Topics will include measurement of wages, income, and labor cost; characteristics of labor markets; occupational wage rates; wage determination by employers and under collective bargaining; effects of wage changes on profits and employment; governmental regulation of wages; trends in productivity and national income; labor force and employment problems.

I.&L.R. 461. *SUPERVISION OF PERSONNEL*. (U,G) 2 hours credit. M T W Th F 8. I.&L.R. Bldg. 22. Mr. WINDMULLER.

Consideration of the supervisor's personnel and human relations responsibilities in planning, organizing, scheduling, and directing employee work effort; and the supervisor's relationships with higher supervision. The number of topics will be limited and will be tailored to meet the needs of students. Coverage may include some of these areas: the supervisor's responsibility for developing effective work teams, better communications, and sound human relations; the supervisor's relationship with the union; selecting, developing, motivating, and retaining an adequate work force; development of techniques for interviewing, correction and discipline, adjusting complaints and grievances, and aiding in the solution of employee problems. Opportunity for intensive discussion, analysis, and case study.

I.&L.R. 472. *SOCIAL AND LABOR LEGISLATION*. (U,G) 2 hours credit. M T W Th F 10. I.&L.R. Bldg. 10A. Mr. McCONNELL.

A survey of federal, state, and local legislation designed to promote higher living standards among American people, and to protect living standards against the hazards of an industrial society. The survey will review (1) laws setting standards of working and living conditions in industrial communities, such as minimum wage, and health and safety legislation, (2) the social insurance and assistance programs, and (3) the services offered citizens by government, such as housing, education, and medical services. The legislation will be treated analytically as to its content, administration, and impact on American life and values.

I.&L.R. 699. *SPECIAL STUDIES*. Credit and hours to be arranged.

Directed research in special problems.

INDUSTRIAL EDUCATION

(See *Education*, p. 30)

NONCREDIT SEMINARS AND WORKSHOPS

In the summer of 1955 the School is again offering a series of one-week non-credit seminars and workshops. These units are designed for practitioners, and consequently each will give specific emphasis to an operational area of the field. A partial list of the seminars follows: *Personnel Selection and Placement, Community Relations, In-Plant Communications, Health, Welfare, and Pensions*.

A number of conferences and institutes will also be conducted by the School. A special announcement covering the summer program of the School, including details of cost and content, may be obtained by writing to the office of Resident Instruction, New York State School of Industrial and Labor Relations, Cornell University.

LANGUAGES

The system of course numbering is the same for all languages offered by the Division. Courses 101 and 102 in a given language aim at bringing the student to a level of achievement sufficient to enable him to pass the proficiency examination and thus fulfill the language requirement for graduation. The courses are the equivalent of Courses 101 and 102 offered in the regular academic year.

Course 151-152 is designed to assist graduate students to prepare themselves for the reading examinations required by the Graduate School. This course is to be considered as a full-time program by the students, and the equivalent of six hours of undergraduate credit will be allowed. If fewer than eight students register for this course, the instruction given will be identical with that in 101.

All courses constitute a full academic program of six credit hours and consist of twenty hours of instruction each week at periods to be assigned. Registration for these courses will be closed when the capacity of the sections has been reached.

Frnch. 101. *FRENCH*. (U) 6 hours credit. Morrill. Mr. HALL and staff.

Frnch. 102. *FRENCH*. (U) 6 hours credit. Prerequisite, French 101 or equivalent. Morrill. Mr. HALL and staff.

Germ. 101. *GERMAN*. (U) 6 hours credit. Morrill. Mr. MOULTON and staff.

Germ. 102. *GERMAN*. (U) 6 hours credit. Prerequisite, German 101 or equivalent. Morrill. Mr. MOULTON and staff.

Germ. 151-152. *GERMAN*. (G) 6 hours credit. For graduate students acquiring reading proficiency. Morrill. Mr. MOULTON and staff.

Span. 101. *SPANISH*. (U) 6 hours credit. Morrill. Mr. AGARD and staff.

Span. 102. *SPANISH*. (U) 6 hours credit. Prerequisite, Spanish 101 or equivalent. Morrill. Mr. AGARD and staff.

PHYSICAL SCIENCES AND MATHEMATICS

ASTRONOMY

Astro. 20. *THE PHYSICAL UNIVERSE*. (U,G) 2 hours credit. M T W Th F 11. Astronomy Bldg. 100. Mr. SHAW.

Survey of the known universe including planets, comets, meteors, the sun, stars, our galaxy, and extragalactic systems. Telescopes and spectroscopy. Space travel and the origin of celestial bodies. Observational work at Fuertes Observatory.

Astro. 30. *WORKSHOP IN THE TEACHING OF ASTRONOMY*. (U,G) 2 or 3 hours credit. Astronomy Bldg. 100. Mr. SHAW and assistant.

PART A. 2 hours credit. M T W Th F 10.

An analysis of the science unit in astronomy for teachers of secondary school science, college teachers of elementary astronomy, and group leaders with a view to strengthening its effectiveness as a preparation for the appreciation and solution of problems arising from man's conquest of space. Objectives are: (a) consideration

of curriculum content for high school, college, or civic groups; (b) a review, with emphasis on teaching techniques, of subject matter for various curriculums; (c) methods and materials for demonstrations, model construction, group projects, celestial observations, and sources of supply.

Teachers or group leaders should bring texts or manuals they have used or propose to use in their own classes.

PART B. 1 hour credit. Hours to be arranged.

Opportunity for a limited number of registrants to construct under supervision the optical elements for their own reflecting telescopes. Persons who wish to enroll in this part of the course must reserve a place and secure instructions regarding materials before June 15, 1955, by writing to Professor R. W. Shaw, Dept. of Astronomy, Rockefeller Hall, Ithaca, N.Y.

CHEMISTRY

*Chem. 105-106. *GENERAL CHEMISTRY*. (U) 6 hours credit. Lectures and recitations, M T W Th F 8-10, Baker 207. Laboratory, M T W Th F 10-1, Baker 150. Mr. PLANE and assistants.

For those students who intend to take more chemistry, this course serves as a prerequisite to the more advanced courses in chemistry. Secondary school chemistry is not a prerequisite. The course may be elected by students who do not intend to take more chemistry. Emphasis on the more important chemical principles and facts, on the scientific method, and on the relation of chemistry to the other fields of knowledge and to everyday life. Text: Laubengayer, *General Chemistry*; Laubengayer, *Laboratory Manual and Problems in General Chemistry*. Fee, \$10.

*Chem. 201. *INTRODUCTORY QUALITATIVE ANALYSIS* (short course). (U,G) 4 hours credit. Prerequisite, general chemistry. Lectures, M T W Th F 8, Baker 7. Laboratory, three hours daily except Saturday between 9 and 1, Baker 50. Mr. Dows and assistant.

A study of the properties and reactions of the common elements and acid radicals, and their detection in various solutions. Texts: Hogness and Johnson, *Ionic Equilibrium as Applied to Qualitative Analysis*; Heisig, *Semi-micro Qualitative Analysis*. Fee, \$15.

Chem. 205. *INTRODUCTORY QUALITATIVE ANALYSIS*. (U,G) 3 hours credit. Prerequisite, general chemistry. Chemistry 207 must be taken with 205. Lectures, M T W Th F 8. Recitations, T Th 9, Baker 7. Mr. Dows.

A study of the application of the theories of general chemistry to the systematic separation and detection of the common elements and acid radicals. Text: Hogness and Johnson, *Ionic Equilibrium as Applied to Qualitative Analysis*.

*Chem. 207. *INTRODUCTORY QUALITATIVE LABORATORY*. (U,G) 3 hours credit. Prerequisite, general chemistry. Must be taken with Chemistry 205. Laboratory, M W F 9-1 and T Th 10-1. Baker 50. Mr. Dows and assistant.

A study of the properties and reactions of the common elements and acid radicals and their detection in various solutions. Text: Heisig, *Semi-Micro Qualitative Analysis*. Fee, \$15.

*Chem. 215. *INTRODUCTORY QUANTITATIVE ANALYSIS* (short course). (U,G) 4 hours credit. Prerequisite, qualitative analysis. Lectures, M T W Th F 8, Baker 177. Laboratory, three hours daily except Saturday between 9 and 1, Baker 252. Mr. WIDOM and assistant.

A study of the fundamental principles of gravimetric and volumetric analysis, and the analysis of various substances by these methods. Texts: Kolthoff and

Sandell, *Textbook of Quantitative Inorganic Analysis*; Nichols and Morse, *Laboratory Manual of Introductory Quantitative Analysis*. Fee, \$15.

Chem. 220. *INTRODUCTORY QUANTITATIVE ANALYSIS*. (U,G) 3 hours credit. Prerequisite, qualitative analysis. Chemistry 222 must be taken with 220. Lectures, M T W Th F 8; recitations, T Th 9. Baker 177. Mr. WIDOM.

A study of the fundamental principles of gravimetric and volumetric analysis with practice in stoichiometry. Text: Kolthoff and Sandell, *Textbook of Quantitative Inorganic Analysis*.

*Chem. 222. *INTRODUCTORY QUANTITATIVE LABORATORY*. (U,G) 3 hours credit. Prerequisite, qualitative analysis. Must be taken with Chemistry 220. Laboratory, M W F 9-1 and T Th 10-1. Baker 252. Mr. WIDOM and assistant.

Laboratory practice in the preparation and standardization of various volumetric solutions and the analysis of a variety of substances by volumetric and gravimetric methods. Text: Nichols and Morse, *Laboratory Manual of Introductory Quantitative Analysis*. Fee, \$15.

Chem. 303. *ELEMENTARY ORGANIC CHEMISTRY*. (U,G) 4 hours credit. Prerequisite, general chemistry. Qualitative analysis is desirable but not required. Chemistry 305 must be taken with Chemistry 303. Lectures, M T W Th F 8-10. Baker 107. Mr. PHILLIPS.

A study of aliphatic and aromatic organic compounds, their occurrence, relations, and uses. Text: English and Cassidy, *Principles of Organic Chemistry*.

*Chem. 305. *ELEMENTARY ORGANIC LABORATORY*. (U,G) 2 hours credit. Prerequisite, general chemistry; qualitative analysis is desirable but not required. Must be taken with Chemistry 303. Laboratory, M T W Th F 10-12:30. Baker 250. Mr. PHILLIPS and assistant.

Laboratory experiments on the preparation and reactions of typical organic compounds. Text: Adams and Johnson, *Laboratory Experiments in Organic Chemistry*. Fee, \$15.

Chem. 307. *INTRODUCTORY ORGANIC CHEMISTRY*. (U,G) 3 hours credit. Prerequisite, general chemistry; qualitative analysis is desirable but not required. Lectures and written reviews, M T W Th F 8, and also at 9 during the first three weeks. Baker 107. Mr. PHILLIPS.

A study of the more important compounds of carbon, their occurrence, methods of preparation, relations, and uses. The work covered is equivalent only to the first half of the year course; students who wish a complete course should register for Chemistry 303 and 305. Text: English and Cassidy, *Principles of Organic Chemistry*.

*Chem. 311. *INTRODUCTORY ORGANIC LABORATORY*. (U,G) 3 hours credit. Prerequisite or parallel course, Chemistry 307. Laboratory experiments and oral reviews, M T W Th F 10-12:30. Baker 250. Mr. PHILLIPS and assistant.

The student prepares typical compounds of carbon and familiarizes himself with their properties, reactions, and relations. Text: Adams and Johnson, *Laboratory Experiments in Organic Chemistry*. Fee, \$20.

GEOLOGY

Geol. 901u. *SUMMER FIELD SCHOOL IN GEOLOGY*. (U,G) 6 hours credit. Mr. NEVIN. June 13-July 23.

Registration limited to men. For full information write to Department of Geology and Geography, McGraw Hall, Ithaca, N.Y.

MATHEMATICS

Math. 162. *ANALYTIC GEOMETRY AND CALCULUS*. (U) 3 hours credit. Prerequisite, Mathematics 161 or the equivalent. M T W Th F S 10. White 103 and 111. Mr. FLESCHE and Mr. RUBEL.

Differentiation and integration of algebraic, trigonometric, logarithmic, and exponential functions with applications. Related topics, including polar coordinates, parametric equations. Text: Holmes, *Calculus and Analytic Geometry*, chs. vi-x.

Math. 163. *ANALYTIC GEOMETRY AND CALCULUS*. (U) 3 hours credit. Prerequisite, Mathematics 162 or the equivalent. M T W Th F S 10. White 121. Mr. GOLDBABER.

Infinite series, solid analytic geometry, partial derivatives, multiple integrals. Text: Kells, *Analytic Geometry and Calculus*, chs. xxii-xxvi.

Math. 201. *DIFFERENTIAL EQUATIONS*. (U,G) 3 hours credit. Prerequisite, Mathematics 163 or the equivalent. M T W Th F S 9. White 121. Mr. GOLDBABER.

A standard beginning course in ordinary differential equations.

(Note: It is planned to give either Math. 201 or Math. 611, depending on the demand as indicated by preregistration. If preregistration indicates there is sufficient demand, both will be given.)

Math. 301. *DETERMINANTS AND MATRICES*. (U,G) 3 hours credit. Prerequisite, Mathematics 163. M T W Th F S 9. White 103. Mr. FLESCHE.

A treatment of such topics as determinants, matrices, linear dependence, linear equations, linear transformations, numerical methods of computation, and reduction by means of orthogonal transformations.

(Note: It is planned to give either Math. 301 or Math. 341, depending on the demand as indicated by preregistration. If preregistration indicates there is sufficient demand, both will be given.)

Math. 341. *THEORY OF NUMBERS*. (U,G) 3 hours credit. Prerequisite, Mathematics 162. M T W Th F S 9. White 111. Mr. RUBEL.

The elementary theory of real rational integers. Divisibility; primality; congruences; primitive roots; Diophantine problems. (See note under Math. 301.)

Math. 405. *HIGHER GEOMETRY*. (U,G) 3 hours credit. Prerequisite, Mathematics 163 or the equivalent. M T W Th F S 11. White 103. Mr. FLESCHE.

A comparison of the synthetic and analytic methods in Euclidean, affine, and projective geometries.

(Note: It is planned to give either Math. 405 or Math. 411, depending on the demand as indicated by preregistration. If preregistration indicates there is sufficient demand, both will be given.)

Math. 411. *ELEMENTARY POINT SET TOPOLOGY*. (U,G) 3 hours credit. Prerequisite, Mathematics 163. M T W Th F S 11. White 111. Mr. RUBEL.

A study of point sets in the plane, with special emphasis on the aspects of plane topology that are used in calculus. (See note under Math. 405.)

Math. 611. *HIGHER CALCULUS*. (U,G) 3 hours credit. Prerequisite, Mathematics 201. M T W Th F S 9. White 121. Mr. GOLDBABER.

Partial differentiation, multiple and line integrals, vector analysis, applications. (See note under Math. 201.)

PHYSICS

*Phys. 103. *INTRODUCTORY EXPERIMENTAL PHYSICS*. (U,G) 3 hours credit. Demonstration lectures, M T W Th F S 8, Rockefeller A. Recitations, M T W Th F S 9, Rockefeller 103. Laboratory, M T W Th F 2-4, Rockefeller 220. Mr. MOORE.

Mechanics, heat and sound. Text: Kolin, *Physics*. This course will be completed at the end of the first three weeks of the Summer Session. Fee, \$5.

*Phys. 104. *INTRODUCTORY EXPERIMENTAL PHYSICS*. (U,G) 3 hours credit. Must be preceded by Physics 103 or by a study of mechanics in either high school or college physics. Demonstration lectures, M T W Th F S 8, Rockefeller A. Recitations, M T W Th F S 9, Rockefeller 103. Laboratory, M T W Th F 2-4, Rockefeller 220. Mr. MOORE.

Electricity and light. Text: Kolin, *Physics*. This course will start with the fourth week of the Summer Session and will be completed at the end of the Summer Session. Fee, \$5.

Phys. 115. *MECHANICS*. (U) 3 hours credit. A course for students of engineering with a deficiency in physics. M T W Th F 8 and M 2-4. Rockefeller 104. Mr. NEWHALL. Text: Sears-Zemansky, *College Physics, Part I*.

*Phys. 117. *ELECTRICITY AND MAGNETISM*. (U,G) 3 hours credit. Prerequisite, Physics 115 and Calculus or simultaneous registration in Mathematics 163. Lectures, T Th 9, Rockefeller A. Recitations, M T W Th F 8, Rockefeller 105. Laboratory, T Th F 2-4:30, Rockefeller Annex. Mr. TOMBOULIAN.

Constitutes the third term of a four-term sequence in general physics required of students of mechanical, electrical, and chemical engineering and of engineering physics. Includes fundamentals of electricity and magnetism of the sequence. Text: Sears, *Principles of Physics, II: Electricity and Magnetism*. Fee, \$5.

SOCIAL SCIENCES

ECONOMICS

Econ. 101. *ELEMENTS OF ECONOMICS*. (U,G) 4 hours credit. M T W Th F 10-12. Goldwin Smith 242. Mr. NEWHOUSE.

A survey of the existing economic order in the United States, its more salient and basic characteristics, and its operations. This is the basic course in economics, and it or its equivalent is prerequisite to advanced courses in economics.

Econ. 220. *PROSPERITY AND DEPRESSION*. (U,G) 2 hours credit. Prerequisite, Economics 101 or the equivalent. M T W Th F 8. Goldwin Smith 256. Mr. DOWD.

Historical and analytical examination of the problems of business fluctuations, employment, and economic growth in the United States.

Econ. 325. *GOVERNMENT AND BUSINESS*. (U,G) 2 hours credit. Prerequisite, Economics 101 or the equivalent. M T W Th F 10. Goldwin Smith 256. Mr. DOWD.

An examination of the government-business relationship in America, the factors making for change in this relationship, and the meaning of this relationship for the economy and society in which it exists and changes.

Econ. 607. *ECONOMIC POLICY*. (U,G) 2 hours credit. Prerequisite, Economics 101 or the equivalent. M T W Th F 9. Goldwin Smith 264. Mr. BUCHANAN.

A general introduction to the principal problems of economic policy in the contemporary American scene: stability and instability in national income and employment; the control of monopoly power; equality and inequality in income distribution; international economic policy, etc.

Econ. 709. *ECONOMIC DEVELOPMENT OF UNDERDEVELOPED AREAS.* (U,G) 2 hours credit. Prerequisite, Economics 101 or the equivalent. M T W Th F 11. Goldwin Smith 264. Mr. BUCHANAN.

An analytical and historical survey of the principal problems in economic development: causes of economic backwardness; dynamic factors in development, past and present; finance and development; economic development and the world economy, etc.

GOVERNMENT

Govt. 104. *COMPARATIVE GOVERNMENT.* (U,G) 2 hours credit. M T W Th F 9. Boardman 320. Mr. ROCHE.

A comparative study of the governments of the United States, Great Britain, and France.

Govt. 235. *AMERICAN POLITICAL THOUGHT.* (U,G) 2 hours credit. M T W Th F 10. Boardman 320. Mr. ROCHE.

The development of American political thought, with emphasis on the interaction of history and ideas.

HISTORY

Hist. 157. *THE UNITED STATES IN THE TWENTIETH CENTURY.* (U,G) 2 hours credit. M T W Th F 9. Boardman 121. Mr. GATES.

Rise of Big Business, extension of social control, conservation, America in world affairs, the New Deal, World Wars I and II, postwar problems.

Hist. 409. *WAR AND REVOLUTION IN EUROPEAN HISTORY, 1789-1914.* (U,G) 2 hours credit. M T W Th F 8. Boardman 122. Mr. CAIRNS.

The origins, nature, and significance of the principal European wars and of the international repercussions of the major domestic revolutions from 1789 to 1914.

Hist. 429. *THE DECLINE OF EUROPE, 1914 TO THE PRESENT.* (U,G) 2 hours credit. M T W Th F 10. Boardman 122. Mr. CAIRNS.

The political, social, and economic development of the major powers; the growth, realization, and collapse of instruments of international cooperation; the origins and results of World War II.

Hist. 721. *THE WEST IN AMERICAN HISTORY.* (U,G) 2 hours credit. M T W Th F 11. Boardman 121. Mr. GATES.

The westward movement, creation of territories and states, the pioneer, farm making, canals and railroads, land policies, agrarianism, nationalism. Text: Billington, *Westward Expansion*.

MENTAL HEALTH

*M.Health. 1. *PRINCIPLES AND PRACTICES IN MENTAL HEALTH.* (U,G) 3 hours credit. M T W Th F 9, T 2-5. Goldwin Smith 124. Dr. DARLING and Mr. SUMMERSKILL.

Principles of mental health based on clinical and experimental observation. The application of these principles in teaching and other occupations will be studied.

Certain personality and behavior problems and procedures of prevention and treatment will be reviewed. Laboratory sessions will include viewing and discussing instruction films in mental health. Fee, \$1.

PHILOSOPHY

Phil. 104. *PROBLEMS OF PHILOSOPHY*. (U) 2 hours credit. M T W Th F 9. Goldwin Smith 227. Mr. KENNICK.

Selected problems in logic, theory of knowledge, ethics, and metaphysics. Text: John Hospers, *An Introduction to Philosophical Analysis*.

Phil. 210. *THE ETHICAL FOUNDATIONS OF DEMOCRACY*. (U) 2 hours credit. M T W Th F 11. Goldwin Smith 227. Mr. KENNICK.

A critical examination of the moral issues involved in the notions of liberty, rights, equality, social justice, the "due process" of law, and the respect for persons. Readings in Locke, Jefferson, Mill, Tawney, Dewey, R. B. Perry, and some of the critics of democracy.

PSYCHOLOGY

Psych. 101. *INTRODUCTION TO PSYCHOLOGY*. (U) 2 hours credit. M T W Th F 9. Morrill 340. Mr. WALK.

An introduction to the scientific study of behavior and experience, covering such topics as perception, motivation, emotion, learning, and the higher thought processes, personality and individual differences. This course is prerequisite to further work in the Department.

Psych. 224. *PSYCHOBIOLOGY*. (U,G) 2 hours credit. M T W Th F 10. Morrill 340. Mr. LIDDELL.

Conditioning in relation to emotional behavior in animal and man with experimental demonstrations. Our present conceptions of the biological basis of human behavior.

Psych. 301. *PERSONALITY*. (U,G) 2 hours credit. T Th 2-4:30. Morrill 340. Mr. BRONFENBRENNER.

The study of personality and its development. Particular attention is given to the role of interpersonal and cultural factors affecting behavior.

Psych. 352. *PSYCHOLOGICAL TESTS OF PERSONALITY*. (U,G) 3 hours credit. Students who have not had a first course on psychological tests should obtain consent of the instructor to enroll. Lectures, M T W Th F 9; observation of testing and examination of tests one afternoon a week, hours to be arranged. Morrill 310. Mr. FREEMAN.

Study of the psychological principles employed in the development of personality rating scales, personality inventories, projective techniques, and situational tests. Their uses in group and individual studies of pupils and in guidance clinics. Demonstrations in administering and scoring tests and in interpreting test findings.

Psych. 405. *ABNORMAL PSYCHOLOGY*. (U,G) 2 hours credit. M T W Th F 8. Morrill 340. Mr. LIDDELL.

An analysis of the main concepts of abnormal psychology and a review of the manifestations of the major mental disorders. Fundamental problems of mental health in the light of recent investigations.

Psych. 412. *THE PSYCHOLOGY AND CLINICAL STUDY OF EXCEPTIONAL CHILDREN*. (G; U by permission) 2 hours credit. M T W Th F 11. Morrill 340. Mr. FREEMAN.

Psychological analyses of children who deviate markedly from the usual: the gifted, the feeble-minded, those with behavior and personality problems, those having special abilities and disabilities, etc. Clinical psychological procedures employed with these groups; educational implications.

SOCIOLOGY, ANTHROPOLOGY, AND RURAL SOCIOLOGY

Soc. 101. *INTRODUCTION TO THE STUDY OF SOCIETY*. (U,G) 2 hours credit. M T W Th F 9. Goldwin Smith 164. Mr. RAMSEY.

A survey of the field of sociology; socialization of the child, groups, community organization, institutions, and social change.

Soc. 104. *CONTEMPORARY SOCIAL PROBLEMS*. (U,G) 2 hours credit. M T W Th F 10. Goldwin Smith 164. Mr. TAIETZ.

An analysis of major social problems; the individual maladjustment and social disorganization which underlie these problems; community resources for treatment and prevention.

R.Soc. 134u. *PUBLIC PROBLEMS OF AGRICULTURE AND FARM PEOPLE*. (U,G) 2 hours credit. July 5–July 23; July 25–August 13. M T W Th F 10–12. Field trips to be arranged. Warren 31. Mr. LARSON and invited lecturers.

This course is designed to provide the professional agricultural worker with basic information about selected major contemporary public problems in relation to agriculture and farm people. Such topics as rural-urban relationships, low income and underemployed farmers, migratory agricultural labor, population trends, social security, health insurance, land tenure, credit, soil conservation, and price and income supports will be included. Each problem selected will be analyzed in terms of historical background, public policy direction, programs to carry out policy, and the economic, social, and political implications of the policy and program. For selected problems the policies and programs of the United States will be compared with those of other countries, especially Canada, Great Britain, and the Scandinavian countries. Examples of educational methods in the field of public problems will be presented.

Soc. 433. *SOCIAL STRATIFICATION*. (U,G) 2 hours credit. M T W Th F 8. Goldwin Smith 164. Mr. RAMSEY.

Caste, class, strata, and vertical mobility in the United States, Russia, England, and other industrial countries, with some attention to minority groups in the United States.

EXTENSION EDUCATION

JULY 18–AUGUST 5

Cornell University conducts one of four regional summer schools for the professional improvement of extension workers. Twenty-two states were represented in the enrollment last year. Six courses are offered in the morning, and afternoons are mostly devoted to optional activities such as field trips, recreation, or special seminars. Students may choose two courses for three hours credit at the graduate level. Tuition is \$40. For printed announcement with complete details write to Professor L. D. Kelsey, Roberts Hall, Ithaca, N.Y. The list of courses follows:

8 A.M.

Extch. 5u. *PRINCIPLES IN 4-H CLUB AND YOUTH WORK*. (G) 1½ hours credit. Daily. Warren Hall 260. Mr. LANG.

Especially designed for county 4-H Club agents and other extension youth workers. Conducted as a semi-workshop. Interests and needs, objectives, planning, methods, and leader training for 4-H Club work. Each person will need to develop a term paper, preferably based upon a real problem. To know one's problem before coming and to be able to state it clearly will be helpful. Students are urged to bring files of their own materials for use in class work. Persons interested especially in "Young Adult Work" may be given individual attention.

Extch. 9u. *FARM BUSINESS PLANNING*. (G) 1½ hours credit. Daily. Warren 160. Mr. WARREN.

The farm unit approach in farm and home management. Developed primarily to meet the needs of extension agents working with farm families under the expanded extension program and dealing with the organization and operation of the farm from the point of view of efficiency and continuous profit. Visits will be made to farms, and the class will develop specific plans for attaining the objectives of the family. Although the course will be concerned primarily with the work of county agricultural agents, it will furnish background for home demonstration agents and other extension workers who work principally with the home. One or more sessions led by a home management specialist may be arranged at the discretion of the class.

9:30 A.M.

Extch. 4u. *PROGRAM BUILDING IN EXTENSION EDUCATION*. (G) 1½ hours credit. Daily. Warren Hall 260. Mr. LEAGANS.

A systematic analysis of the extension program-building process, with emphasis on basic principles and procedures for applying them. Designed to help extension workers further develop a workable understanding of the nature of the extension program-building process, including the unit approach, and to help them acquire some useful procedures. Special consideration is given to problems of (1) identifying the needs and interests of people, (2) arriving at objectives for programs, and (3) organizing extension effort to attain continuity and integration in long-time programs. The course is equally applicable to homemaking, 4-H work, and agricultural activity.

Extch. 8u. *MARKETING INFORMATION FOR CONSUMERS*. (G) 1½ hours credit. Daily. Warren Hall 160. Miss ROLLINS, Mr. EARLE, and Miss WOOD.

Designed to provide some basic information for those who work or plan to work in consumer education programs. The course will be taught by three persons. An agricultural economist will present and discuss some of the marketing problems as the producer sees them. A family economist will present information about economic conditions as they affect the buying position of families. Pertinent information about the quality of products will be presented by an extension specialist in marketing who is associated with a program in consumer information. It is hoped that among the results will be an appreciation of the breadth of such work and an ability to understand and use some of the wealth of material appropriate for such programs.

11 A.M.

Extch. 1u. *EVALUATION IN EXTENSION WORK*. (G) 1½ hours credit. Daily. Warren Hall 260. Mr. MOE.

Designed to help extension workers systematically measure and evaluate the things they do and the results they achieve in relation to extension objectives. Evaluation will be interpreted as an integral part of the total educational process. Systematic analysis of a worker's day-to-day observations will be stressed; question-

naire construction, sampling, interviewing, and analysis and interpretation of data will be discussed. The principles of evaluation will be developed in relation to specific problems of class members.

Extch. 7u. *TECHNIQUES IN TELEVISION*. (G) 1½ hours credit. Daily. Room to be announced. Mr. TONKIN.

Television as a means of disseminating extension information. Practice in planning, preparing, and presenting extension-type television programs. Practice in television techniques, scripting, selection of visuals, and problems of program production.

1:30 P.M.

Extch. 10u. *EXTENSION SUPERVISION*. (G) 1½ hours credit. Daily. Warren Hall 160. Mr. CROY.

An analysis of supervisory functions and methods in extension work, systems and principles of administration and supervision, training of extension workers in the field, development of morale. Some criteria for successful supervision will be determined in the class. Designed for state or county extension workers having responsibility for the work of other employees. Class work will include presentations by the instructor and others, and discussions led by members of the class.

Officers

Deane W. Malott, A.B., M.B.A., LL.D., President of the University.
William H. Farnham, Ph.D., Dean of the University Faculty.
Sanford S. Atwood, Ph.D., Dean of the Graduate School.
Lloyd H. Elliott, Ed.D., Director of the Summer Session.

Faculty

Meyer H. Abrams, Ph.D., Professor of English.
Hazard S. Adams, Ph.D., Instructor in English.
Robert M. Adams, Ph.D., Associate Professor of English.
Frederick B. Agard, Ph.D., Professor of Modern Languages.
J. Stanley Ahmann, Ph.D., Associate Professor of Rural Education.
H. Darkes Albright, Ph.D., Associate Professor of Speech and Drama.
Robert W. Albright, Ph.D., Assistant Professor of Speech and Drama.
Howard G. Andrus, Ph.D., Assistant Professor of Rural Education.
Richard R. Arnold, M.F.A., Assistant Professor of Housing and Design.
Albert A. Austen, M.A., Instructor in Speech and Drama.
Alfred L. Baldwin, Ph.D., Professor of Child Development and Family Relationships.
Sara E. Blackwell, Ph.D., Associate Professor of Home Economics Education.
Urie Bronfenbrenner, Ph.D., Professor of Psychology.
John M. Brophy, Ph.D., Associate Professor of Industrial and Labor Relations.
Norman S. Buchanan, Ph.D., Professor of Economics, University of California, Berkeley, California.
Joseph D. Burroughs, M.S., Assistant Professor of Child Development and Family Relationships.
John Cairns, Ph.D., Instructor and Tutor in History, University of Toronto, Toronto, Canada.
William Campbell, M.A., Associate Professor of Music.
Robert L. Chapman, Ph.D., Instructor in English.
Daniel G. Clark, Ph.D., Professor of Botany.
Robert F. Coffin, Ph.D., Instructor in Rural Education.

- Dorothy Cooke, Supervisor of Elementary Education, State Education Department, Albany.
- George P. Crepeau, A.M., Instructor in Speech and Drama.
- Otto Croy, M.S., Professor in Extension, U.S.D.A., Washington, D.C.
- Kathleen Cutlar, M.S., Associate Professor of Institution Management.
- C. Douglas Darling, M.D., Professor of Clinical and Preventive Medicine.
- Robert A. Donovan, Ph.D., Instructor in English.
- Douglas F. Dowd, Ph.D., Assistant Professor of Economics.
- David A. Dows, Ph.D., Instructor in Chemistry.
- Wendell Earle, Ph.D., Associate Professor of Agricultural Economics.
- Lloyd H. Elliott, Ed.D., Professor of Educational Administration and Director of the Summer Session.
- Lynn A. Emerson, Ph.D., Professor of Industrial and Labor Relations.
- Harold Feldman, Ph.D., Associate Professor of Child Development and Family Relationships.
- Faith Fenton, Ph.D., Professor of Food and Nutrition.
- Robert H. Ferguson, Ph.D., Associate Professor of Industrial and Labor Relations.
- Richard Fischer, Ph.D., Assistant Professor of Rural Education.
- Hans K. Flesch, Ph.D., Instructor in Mathematics.
- Ephim G. Fogel, M.A., Instructor in English.
- Edward W. Foss, M.S.A., Professor of Agricultural Engineering.
- Frank S. Freeman, Ed.D., Professor of Psychology.
- Paul W. Gates, Ph.D., Professor of History.
- Leona Gelder, M.S., Principal, South Hill School, Ithaca.
- Perry W. Gilbert, Ph.D., Professor of Zoology.
- Fern Gleiser, M.S., Professor of Institution Management.
- Marvin D. Glock, Ph.D., Professor of Rural Education.
- Jacob K. Goldhaber, Ph.D., Instructor in Mathematics.
- Eva L. Gordon, Ph.D., Associate Professor of Rural Education.
- William Gragg, Ph.D., Superintendent of Schools, Ithaca.
- Robert A. Hall, Ph.D., Professor of Modern Languages.
- Albert Harris, Ph.D., Director, Educational Clinic, Queens College, New York City.
- Marie Harris, M.S., Assistant Professor of Institution Management.
- Baxter Hathaway, Ph.D., Associate Professor of English.
- Gordon W. Heath, A.B., Assistant in Zoology.
- Lawrence B. Hixon, Ph.D., Assistant Professor of Education.
- Helen Hoefer, M.S., Associate Professor of Home Economics Education.
- Margaret Hutchins, Ph.D., Professor of Home Economics Education.
- Philip G. Johnson, Ph.D., Professor of Rural Education.
- William R. Keast, Ph.D., Associate Professor of English.
- William E. Kennick, Ph.D., Associate Professor of Philosophy, Oberlin College, Oberlin, Ohio.

- Katherine A. Knapp, M.S.Ed., Elementary Teacher, Ithaca Public Schools, Ithaca.
- Marjorie Knoll, Ph.D., Assistant Professor of Economics of the Household and Household Management.
- William R. Kunsela, Ph.D., Assistant Professor of Rural Education.
- Chester C. Lang, M.A., Professor in Extension, U.S.D.A., Washington, D.C.
- Robert W. Langbaum, Ph.D., Instructor in English.
- Myrna Lapidus, M.S., Assistant in Home Economics Education, State Education Department, Albany.
- Olaf Larson, Ph.D., Professor of Rural Sociology.
- J. Paul Leagans, Ph.D., Professor of Rural Education.
- Robert E. Lee, Ph.D., Assistant Professor of Ornamental Horticulture.
- Howard S. Liddell, Ph.D., Professor of Psychology.
- John G. Linn, Ph.D., Assistant Professor of English.
- Karla Longree, Ph.D., Associate Professor of Institution Management.
- John Mack, Ph.D., Director, Adult Education, Ithaca Public Schools, Ithaca.
- Georgiana Marks, M.A., Associate in Home Economics Education, State Education Department, Albany.
- Lillian V. Mastrotto, M.Ed., Reading Consultant.
- John W. McConnell, Ph.D., Professor of Industrial and Labor Relations.
- Joseph Mersand, Ph.D., Bureau of Curriculum Research, New York City.
- Edward O. Moe, Ph.D., Professor in Extension Service.
- James E. Montgomery, Ph.D., Associate Professor of Housing and Design.
- Frank L. Moore, Ph.D., Assistant Professor of Physics.
- Helen Moser, M.S., Associate Professor of Home Economics Education.
- William G. Moulton, Ph.D., Professor of Modern Languages.
- Henry A. Myers, Ph.D., Professor of English.
- A. Gordon Nelson, Ph.D., Associate Professor of Rural Education.
- Charles M. Nevin, Ph.D., Professor of Geology.
- Herbert F. Newhall, Ph.D., Professor of Physics.
- Joseph Newhouse, A.B., Instructor in Economics.
- Stephen Parrish, Ph.D., Instructor in English.
- Mark Perlman, Ph.D., Assistant Professor of Industrial and Labor Relations.
- Donald D. Phillips, Ph.D., Assistant Professor in Chemistry.
- Robert A. Plane, Ph.D., Assistant Professor in Chemistry.
- Charles Ramsey, Ph.D., Associate Professor of Sociology.
- Katherine Reeves, M.S., Professor of Child Development and Family Relationships.
- Robert F. Risley, Ph.D., Assistant Professor of Industrial and Labor Relations.

- John P. Roche, Ph.D., Associate Professor of Government, Haverford College, Haverford, Pa.
- Mabel A. Rollins, Ph.D., Professor of Economics of the Household and Household Management.
- Lee A. Rubel, Ph.D., Instructor in Mathematics.
- William M. Sale, Ph.D., Professor of English.
- R. William Shaw, Ph.D., Professor of Astronomy.
- Bruce E. Shear, M.S., Chief, Guidance Bureau, Department of Education, New York.
- Albert Shire, Ph.D., Instructor in Child Development and Family Relationships.
- Charles G. Sibley, Ph.D., Associate Professor of Conservation.
- Ora Singleton, M.S., Associate Professor of Textiles and Clothing.
- Helen Smith, B.S., Professor of Textiles and Clothing.
- Linda Smith, Ed.D., Professor of Education, Cortland State Teachers College, Cortland.
- Marjorie C. Smith, A.B., Principal, West Hill School, Ithaca.
- S. E. Smith, Ph.D., Professor of Animal Husbandry.
- William A. Smith, Ph.D., Professor of Rural Education.
- Howard Smither, M.A., Assistant in Music.
- Frances Spratt, M.S., Assistant Professor of Textiles and Clothing.
- Walter H. Stainton, Ph.D., Professor of Speech and Drama.
- Grace Steininger, Ph.D., Professor of Food and Nutrition.
- Evelyn Stout, Ed.D., Assistant Professor of Textiles and Clothing.
- Jane Stoutenburg, M.A., Vice-Principal, Boynton Junior High School, Ithaca.
- Frederick H. Stutz, Ph.D., Associate Professor of Rural Education.
- John Summerskill, Ph.D., Associate Professor of Clinical and Preventive Medicine.
- Philip Taietz, Ph.D., Associate Professor of Rural Sociology.
- Romeyn Y. Thatcher, C.E., Professor of Civil Engineering.
- Richard M. Thomson, Assistant in Astronomy.
- Diran H. Tomboulia, Ph.D., Professor of Physics.
- Joseph Tonkin, B.S., Professor in Extension, U.S.D.A., Washington, D.C.
- Lowell D. Uhler, Ph.D., Associate Professor of Biology.
- Paul J. VanDemark, Ph.D., Associate Professor of Bacteriology.
- Frederick O. Waage, Ph.D., Professor of Fine Arts.
- Richard Walk, Ph.D., Assistant Professor of Psychology.
- Helen Wardeberg, Ph.D., Assistant Professor of Education.
- S. W. Warren, Ph.D., Professor in Extension Service.
- Herbert A. Wichelns, Ph.D., Professor of Speech and Drama.
- Benjamin Widom, Ph.D., Instructor in Chemistry.
- Harold Williams, Ph.D., Professor of Biochemistry.
- Lucille Williamson, Ph.D., Professor of Economics of the Household and Household Management.

John P. Windmuller, Ph.D., Associate Professor of Industrial and Labor Relations.

A. Leon Winsor, Ph.D., Professor of Education and Director of the School of Education.

Mary B. Wood, M.S., Associate Professor of Economics of the Household and Household Management.

Nancy Young, Ph.D., Bureau of Curriculum Research, New York City.

Paul M. Zall, Ph.D., Instructor in English.

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